

**DESCRIPTION**

TAL GOLDSTAR 12 is a grey quick-setting high-strength cement-based adhesive for fixing porcelain, granite, dark-coloured marble and natural stone, ceramic, clay and terrazzo tiles to walls and floors. The adhesive was designed for easy use, allowing a 4 hour pot life.

TAL GOLDSTAR 12 should not be used with white or light-coloured porous natural stone tiles, where a grey adhesive may show through the tile in the form of 'staining'.

**FEATURES**

- high strength
- quick set – trafficable after only 12 hours
- shrinkage compensated

**Classification According to SANS 52004:2013 / EN12004:2007**

TAL GOLDSTAR 12 is classified as a C1T adhesive (cementitious tensile adhesion strength (C1), slip resistant (T), adhesive).

When mixed with TAL BOND as a **total** water replacement, or when TAL BOND POWDER is incorporated in the mix, TAL GOLDSTAR 12 is classified as a C2TS1 adhesive (improved cementitious tensile adhesion strength (C2), slip resistant (T), deformable (S1), adhesive)

When mixed with TAL KEYCOAT or TAL SCREEDBINDER as a **total** water replacement TAL GOLDSTAR 12 is classified as a C2TS2 adhesive ( improved cementitious tensile adhesion strength (C2), slip resistant (T), more deformable (S2), adhesive).

**VOC Content :**

Specification : Green Building Council of South Africa Office Design V1 IEQ-13 Green Star Office Interiors V1.1 IEQ-11	
Ceramic Tile Adhesive : Maximum Limit 65 grams per Litre as VOC content material	TAL GOLDSTAR 12 : < 10g / ℓ as VOC content material

**TECHNICAL DATA**

	With Water	With TAL BOND / TAL BOND POWDER	With TAL KEYCOAT / TAL SCREEDBINDER
Mix Ratio	20kg / 5ℓ	20kg / 5ℓ	20kg / 5.5ℓ
Pot Life*	4 hours	4 hours	4 hours
Open Time*	15 minutes	15 minutes	15 minutes
Application Temperature Range	10°C - 30°C	10°C - 30°C	10°C - 30°C
Initial Set*	6 - 8 hours	6 - 8 hours	6 - 8 hours
Final Set*	12 hours	12 hours	12 hours
Flexibility	Poor	Good	Excellent
Temperature Resistance	0°C - 60°C	-30°C - 100°C	-30°C - 100°C
Ageing	Good	Excellent	Excellent
Resistance to Damp	Poor	Good	Excellent

\*At 25°C and 50% relative humidity.

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**SURFACE PREPARATION**

New floor and wall surfaces must be allowed to cure for the minimum periods detailed below to ensure that the tile installation is not compromised by drying shrinkage movement in the substrate :

- New concrete – 6 weeks
- New screed – 4 weeks
- New brickwork – 4 weeks
- New render – 2 weeks

The substrate must have a moisture content of 5% or less before tiling is commenced. All surface beds should have a damp-proof membrane. Should there be no damp proof membrane below a surface bed or if prevailing moisture levels do not attain 5% (75% RH) or less, it is recommended that TAL X-CALIBUR X-SHIELD VAPORSTOP HB (vapour barrier) be applied prior to tiling to eliminate potential problems associated with excessive moisture in the substrate (such as slow- or non-curing of the adhesive, efflorescence on grout and porous tiles, etc).

Any screeding or rendering must be firmly attached to the underlying concrete or brickwork, and the substrate must be structurally sound (no crumbling, cracking, etc) and of a quality and consistency suitable for tiling. All damaged, defective, deteriorated or hollow sounding areas must be removed and made good before proceeding.

The substrate must be clean and free from all traces of surface laitance and contamination such as dust, dirt, waxes, oils, bitumen, old adhesives, paint, grease, weak cement screeds and renders, shutter release and curing agents, sealing compounds, etc. Organic or fungal growth must be removed and the spores killed using an effective fungicide.

Off-shutter concrete, smooth & dense surfaces, powerfloated & steelfloated surfaces	Clean thoroughly or mechanically abrade to remove shutter release and curing agents, laitance, polishes, etc. *
Existing Tiles	Must be in good condition and firmly attached to the substrate, ie not cracked, loose or hollow sounding. Acid wash and neutralize to remove dirt, grease, grime, sealants, polish, etc.*
Existing vinyl flooring / carpets	Floor coverings must be lifted, and the floor mechanically abraded (chipping, grinding, scabbling, etc) to remove existing fixative. *
Existing paint Existing gypsum skimcoats	The paint/gypsum skimcoat must be in good condition and firmly bonded to the substrate, ie not loose, flaking or peeling, and all traces of grease, grime, soap residues and other contaminants must be removed. <b>Domestic / Interior :</b> Mechanically abrade (chipping, grinding, scabbling, etc) to remove at least 80% of the paint/gypsum skimcoat.* <b>Commercial / Exterior :</b> Mechanically abrade to remove all traces of paint/gypsum skimcoat.
Bitumen adhesive / waterproofing	Mechanically abrade (chipping, grinding, scabbling, etc) to remove completely.*

**The surface must be clean and dry and free of all traces of dust, debris, loose particles and surface contaminants before proceeding.**

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\* Prime the surface with a slurry consisting of 1 part TAL KEYCOAT to 2 parts TAL KEYMIX powder or 2 parts TAL GOLDSTAR 6 or 12 powder (by volume), which is applied using a builder's block brush. Ensure that the entire surface is fully covered with the slurry. Allow this slurry coat to dry for 4 – 6 hours before applying TAL GOLDSTAR 12.

### **MIXING**

Using a mechanical mixer, add 20kg TAL GOLDSTAR 12 to 5 litres clean water while mixing (for optimal performance water temperature should be between 20°C and 25°C). Mix well to a creamy, lump-free consistency. Let the mix stand for 3 - 5 minutes before stirring again. Use within ± 4 hours.

For best results use a full bag in one mix.

For all exterior/exposed and "wet" applications, high traffic areas, areas subjected to thermal stresses or temperature changes, or where some flexibility is required, replace the water in the mix with TAL BOND.

**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.

### **NB :**

- Never add more liquid to a mix which has been left standing for too long, as this will compromise the integrity of the adhesive.
- Warm weather conditions and/or substrate and water temperatures (generally, temperatures above 30°C) may shorten the working time of the mixture, and may even result in flash-setting of the adhesive.
- Low ambient temperatures and/or substrate and water temperatures (generally, temperatures below 15°C) will have detrimental effects on the curing and integrity of the adhesive, ie full cure may not be achieved.

### **APPLICATION**

Ensure that the tiles are dry and the backs are free of dust and contaminants.

Apply the mix to the surface using a notched Wall Trowel for lightweight wall tiles, or a notched Floor Trowel for floor tiles, heavy and/or large format wall tiles and exterior wall tiles where a solid bed of adhesive is essential. TAL GOLDSTAR 12 can be applied in bed thicknesses between 5 – 12mm, and up to 20mm in isolated areas only.

Apply only as much adhesive as can be tiled in 10 – 15 minutes to prevent the adhesive from "skinning" before the tiles are applied. Should a thin skin form, the adhesive must be freshened up by respreading with the notched trowel. Do not wet the adhesive with water as the water will form an anti-adhesive film. Dry or hardened adhesive must be removed and discarded.

Bed tiles firmly using a Rubber Mallet. When tiling floors or exterior walls ensure that the tile is in full contact with the adhesive. Occasionally, lift a tile to ensure that there are no air pockets. Never fix tiles using the 'spot' method.

**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 behind each tile.

Never butt joint tiles. Always leave grout joints between tiles; at least 2mm wide between ceramic wall tiles, 3mm between porcelain, granite and marble tiles, and 5mm between natural stone and ceramic tiles.

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

Ensure that the grout joints and tile panel movement joints and perimeter joints are raked out and all adhesive residues removed before the adhesive dries.

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**NB :**

**Exterior tiling applications must be protected from inclement weather and too-rapid drying during installation. Installations must not be subjected to running water or rain for at least 12 hours and must be protected from frost and direct sunlight for at least 24 hours after installation.**

**GROUTING**

Allow at least 6 - 8 hours after completing the tiling before grouting, depending on atmospheric conditions. Use TAL Grouts according to the instructions. **Do not grout with neat cement.**

**MOVEMENT JOINTS**

Tile panel Movement joints should be located in both directions at maximum 5 metre centres for interior surface bed and wall applications, and maximum 3 metre centres for suspended applications and exterior applications.

Movement joints should also be located around the perimeter of all floors, in all horizontal and vertical corners, against obstructions fixed to the structural background and over all discontinuities in building materials, e.g. at interfaces of concrete and brickwork. In addition, movement joints should be located around any fixtures protruding through the tiled surface such as columns or stairs.

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.

Where practical, the bulk of the depth of the movement joint can be filled with TAL SEALMASTER CORD. Seal the joint using TAL GOLDSTAR SEALMASTER 1000 polyurethane joint sealant in accordance with the manufacturer's instructions.

**COVERAGE**

Coverage is approximately 3kg/m<sup>2</sup> when applied using Notched Wall Trowel, and approximately 6kg/m<sup>2</sup> when applied using a Notched Floor Trowel  
(Actual coverages will be determined by site conditions, workmanship, etc)

**PACKAGING**

TAL GOLDSTAR 12 is available in 20kg bags.

**STORAGE & SHELF LIFE**

When stored in dry, internal conditions between 10°C and 30°C and out of direct sunlight the product has a shelf life of 12 months from date of manufacture. Never store directly on a concrete floor.

**WARNING**

**DO NOT INGEST. USE ONLY AS DIRECTED. WEAR PROTECTIVE GLOVES AND GOGGLES. USE A SUITABLE DUST MASK WHEN MIXING. WORK IN A WELL VENTILATED AREA. DISPOSE OF THIS PRODUCT IN ACCORDANCE WITH LOCAL REGULATIONS. CONTACT TAL FOR FURTHER HEALTH & SAFETY INFORMATION.**

**TAL PRODUCT GUARANTEE**

TAL products are manufactured and tested in accordance with TAL procedures, which are maintained in line with Quality Control System Standard ISO 9001 : 2008. TAL products are guaranteed to be free from manufacturing defects and fit for design purposes.

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This guarantee is subject to the performance of TAL products when used strictly in accordance with their materials and methods specifications for the particular project, and where good workmanship is followed. However, we have no influence over specific site conditions and therefore, if in doubt, the user must always carry out sufficient tests to satisfy himself/herself that the product is suitable for the intended purpose. In special cases, obtain professional advice.

TAL cannot be held responsible for the standard of workmanship on site, or any problems caused by unsound structures or foundations, cracking of the substrate, deflections of slabs or backgrounds, vibration, creep movement of the structure, etc, or any products which have been adulterated, contaminated or misused in any way. The aforementioned list is not exhaustive.

**NOTE :** we require timeous notification, in writing, of an alleged defect and the opportunity to assess and investigate the problem to our satisfaction prior to any remedial work whatsoever being carried out.

### **TAL TECHNICAL ADVICE CENTRE**

For a detailed Materials and Methods Specification contact the TAL Technical Advice Centre on 0860 000 TAL(825), or e-mail [taltech@norcrossa.com](mailto:taltech@norcrossa.com)

Branches : Gauteng (011) 206-9700; Cape (021) 386-1810; Natal (031) 579-2263

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