

TECHNICAL DATA SHEET

GOLDSTAR XL[™]

LARGE FORMAT

TILE ADHESIVE

EXTENDED OPEN
TIME

C2FTES1

EN12004

High-strength grey cement-based tile adhesive for large format wall and floor tiles.

DESCRIPTION

TAL Goldstar XL tile adhesive is a grey polymer-modified quick-setting high-strength shrinkage-compensated cement-based adhesive with extended open time for fixing large format ceramic, porcelain, dark-coloured natural stone (granite, marble, sandstone, etc) tiles to walls and floors.

By rough definition, a large format tile is a tile with the length of at least one edge greater than 600mm (nominal), or a facial area greater than 3500cm² (nominal). Thus, a nominal 600 x 600mm tile would be large format. The adhesive was designed for easy use, allowing a 4-hour pot life and a 30-minute open time.

TAL Goldstar XL can be applied in bed thicknesses between 5 – 12mm, and up to 20mm in isolated areas only (*non-continuous, and not exceeding 20% of the total area to be tiled*).

TAL Goldstar XL 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'. (**TAL Marblefix** light-coloured adhesive should be used in this instance.)

Note : this product is designed for the above-mentioned application only. TAL will not be liable for misuse or adulteration of the product.

FEATURES

- High strength
- Extended open time – 30 minutes
- 4-hour pot life



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CLASSIFICATION ACCORDING TO SANS 52004:2013 / EN12004:2007:

TAL Goldstar XL is classified as a C2FTES1 adhesive (improved cementitious tensile adhesion strength (C2), fast setting (F), slip resistant (T), extended open time (E), deformable (S1) adhesive).

When mixed with TAL Bond as a total water replacement, or when TAL Bond Powder is incorporated in the mix, TAL Goldstar XL is classified as a C2FTES2 adhesive (improved cementitious tensile adhesion strength (C2), fast setting (F), slip resistant (T), extended open time (E), 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 XL: <10g/ ℓ as VOC content material

TECHNICAL DATA:

	WITH WATER	WITH TAL BOND	WITH TAL BOND POWDER
Type	Cement-based tile adhesive		
Setting Type	Quick setting		
Colour	Grey		
Packaging	20kg		
Application Temperature Range (Ambient)	10°C - 30°C		
Open Time*	30 minutes		
Correction Time*	15-20 minutes		
Initial Set*	8-10 hours		
Final Set*	12 hours		
Pot Life* (working time after mixing)	4 hours	3.5 hours	3.5 hours
Mix Ratio	5ℓ/20kg	5ℓ/20kg	1kg/20kg
Flexibility	Good	Excellent	Excellent
Temperature Resistance	0°C - 60°C	-30°C - 100°C	-30°C - 100°C
Resistance to Damp	Good	Excellent	Excellent

* At 23°C and 50% relative humidity.

The above data was obtained under laboratory conditions using freshly manufactured material. Actual results in the field will vary as a result of factors such as Ambient Temperatures, Site Conditions, etc.

PRECAUTIONS:

Please refer to the tile manufacturer's instructions regarding the characteristics of the adhesive (ie C2 - improved cementitious; S1 – deformable, etc) required for the installation of their particular material.

There are permissible manufacturing tolerances for ceramic and porcelain tiles, and large format tiles may have permissible surface flatness irregularities, ie the tile surface may be 'curved' or 'bowed'.

For the installation of large format tiles it is imperative that the substrate to be tiled is totally flat and level. Variations in levels in substrates the substrate must be rectified prior to the tile installations. TAL Screedmaster and TAL Superscreed SL self-levelling underlayment compounds are ideal for levelling of floors prior to the installation of large format tiles.

The use of self-levelling spacer/clip/wedge systems will further assist in reducing 'lippage' of tiles.

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The joint width for fixing large format porcelain tiles (including rectified tiles) should be no less than 3mm wide, and no less than 5mm wide between ceramic tiles.

With a smaller number of joints between large format tiles, compared with the same area of normal format tiling, less stress (movement) can be accommodated at tile joints.

Please refer to the manufacturer's instructions for specific details pertaining to the handling, cutting and cleaning of large format tiles.

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

All substrates should attain a moisture content of 5% (75% RH) or less before tiling is commenced. Should there be no damp proof membrane below a surface bed or if prevailing moisture levels do not attain 5% or less, it is recommended that **TAL 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 bonded to the underlying concrete or brickwork, and the substrate must be of significant strength, 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. *
Bitumen Fixative Residues	Remove vinyl floor covering residues, and all loose or unbonded bitumen fixative residues. Substrate must be firm and sound and clean and dry. Prime with TAL Bitumen Primer .
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. Domestic / Interior : Mechanically abrade (chipping, grinding, scabbling, etc) to remove at least 80% of the paint/gypsum skimcoat.* Commercial / Exterior : Mechanically abrade to remove all traces of paint/gypsum skimcoat.
Bitumen Waterproofing Compound	Mechanically abrade (chipping, grinding, scabbling, etc) to remove completely.*

NOTE : The surface must be clean and dry and free of all traces of dust, debris, loose particles and surface contaminants which could impair adhesion.

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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 XL** 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 XL**.

	<p>Concrete and existing tiles</p>	<p>Paint, gypsum, skimcoat, bitumen, adhesive and waterproofing</p>	
<p>Ensure surface has cured, is firm and sound, and is flat and level .</p>	<p>Clean, and mechanically abrade where necessary. Apply a TAL Keycoat slurry.</p>	<p>Chip surface (min 80%). Remove bitumen adhesive and waterproofing completely. Apply a TAL Keycoat slurry.</p>	<p>Sweep floor to remove dust, loose particles and surface contaminants.</p>
<p>20kg + 5L + 5L *TAL KEYMIX *TAL KEYCOAT</p>		<p>4-6 hours</p>	
<p>Apply a primer slurry (part TAL KEYCOAT mixed with 2parts TAL KEYMIX powder) to smooth and dense surfaces</p>	<p>Spread with a builders block brush. Ensure full coverage</p>	<p>Wait 4-6 hours for primer to cure before tiling.</p>	

MIXING:

Using a mechanical mixer, add 20kg **TAL Goldstar XL** to 5 litres clean, cool 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 (Pot Life).

For best results use a full bag in one mix.

Note : When tiling 'submerged' installation areas, such as swimming pools, water features, etc, 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 XL**.

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Mix 20kg TAL GOLDSTAR XL Tile Adhesive with 5l of cool water. Using a mechanical mixer, mix to a creamy lump-free paste, while adding powder.

Let it stand for 3 minutes then stir again.

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.**

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APPLICATION:

Ensure that the tiles are dry and the backs are free of dust and contaminants which could impair adhesion.

When using large format tiles or panels the adhesive must be applied with a suitable notched trowel using the 'double-buttering' technique, ie the adhesive must be applied on both the substrate *and* back of tile, with due care taken to ensure the corners and edges of the tiles/panels are fully covered with adhesive, to achieve full contact between the substrate, adhesive and tile. This is essential to avoid voids and air pockets in the adhesive bed behind/beneath the tiles or panels.

It is imperative that the installation process is seamless to prevent the adhesive on the substrate or back of tile from 'skinning', and an impaired bond. A 'wet to wet' installation is essential.

TAL Goldstar XL 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 **20 - 30 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 or voids. Never fix tiles using the 'spot' method.

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.

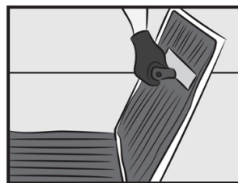
Ensure that the grout joints and tile panel movement joints and perimeter joints are raked out and all adhesive residues removed before the adhesive dries.

NB:

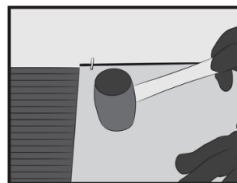
- Exterior tiling applications must be protected from inclement weather and too-rapid drying during installation. Installations must not be subjected to running water or rain for at least 12 hours and must be protected from frost and direct sunlight for at least 24 hours after installation.
- It is important 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).
- Installations subjected to loaded traffic, such as car showrooms, etc should be allowed to cure for a minimum of 72 hours before being exposed to full service conditions.
- Ensure that large format wall tiles are well supported by means of a batten or some type of mechanical device for a minimum of 12 hours, until the adhesive has set sufficiently. Mechanical supports should be incorporated in elevated installations.



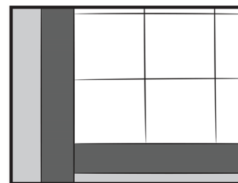
Use within 4 hours (pot life).
Apply adhesive with a suitable notched trowel. Ensure tile is in full contact with the adhesive.
Apply only as much as can be tiled in 20-30 minutes



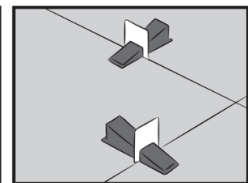
Apply adhesive with a suitable notched trowel on back of tile as well as on the substrate. **The double buttering and wet to wet installation technique is essential**



Bed tiles with rubber mallet. Ensure tiles are in full contact with the adhesive including edges and corners



Support tiles with a mechanical brace for a minimum of 12 hours



Use levelling spacers for floor tiles to keep tiles level

GROUTING:

Allow at least 8 - 10 hours after completing the tiling before trafficking or grouting, depending on site and ambient conditions.

Longer setting times may be required for very large format tiles, ie exceeding 1000mm x 1000mm. Use **TAL Grout** according to the instructions. **Do not grout with neat cement.**

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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 slab applications and exterior applications.

Movement joints should also be located around the perimeter of all floors, in all vertical and internal corners/interfaces, 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.

These joints must be filled and sealed with a suitable backing cord/tape and resilient joint sealant material, eg **TAL Goldstar Sealmaster Cord** and **TAL Goldstar Sealmaster 1000 Polyurethane Joint Sealant & Adhesive**, in accordance with the manufacturer's instructions.

NB : TAL Goldstar Sealmaster 1000 Polyurethane Joint Sealant & Adhesive is not suitable for commercial or institutional shower environments, or for permanently submerged installations such as swimming pools.

COVERAGE:

Coverage is approximately 7 - 8kg/m² when applied using the double buttering technique. (Actual coverages will be determined by site conditions, workmanship, etc).

CLEANING:

Dry powder spillages – sweep up or vacuum powder spillages, ensuring reduced exposure to moisture which potentially activates **TAL Goldstar XL**.

Mixed product – wipe the area with a damp (not wet) sponge before the adhesive dries.

Dry product should be removed using **TAL Epoxy Cleaning Fluid or Gel**.

Clean hands and tools with warm, soapy water before the product dries.

PACKAGING:

TAL Goldstar XL 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. Keep out of reach of children. 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.

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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, OSHAS 18001 and Environmental Management System ISO 14001. TAL products are guaranteed to be free from manufacturing defects and fit for design purposes.

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 themselves that the product is suitable for the intended purpose. In special cases, obtain professional advice.

TAL shall not be liable for the standard of workmanship on site, or for any defects or damage due to external causes or factors beyond the control of TAL including, without limitation, unsound structures or foundations, building movement (cracking, creep, deflection, vibration, etc), design defects, earth tremor or other seismic disturbances, land slip, fire, flood or other immersion, or any products which have been adulterated, contaminated or misused in any way. The 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@tal.co.za

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

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