

DESCRIPTION

TAL EPOXY ADHESIVE & GROUT is a high performance, 3-component epoxy-based adhesive for fixing tiles to walls and floors, and can also be used for subsequent grouting. TAL EPOXY ADHESIVE & GROUT is suitable for use with glass tiles/mosaics and resin bonded tiles, and is ideal for installation areas where chemical resistance and good hygienic conditions are important, such as abattoirs, breweries, dairies, hospitals, food and beverage production and preparation areas, swimming pools, bacteria and mould-growth areas, etc.

TAL EPOXY ADHESIVE & GROUT is available in Natural (light beige-grey), and also in White as a special order.

Classification According to SANS 52004:2013 / EN12004:2007

TAL EPOXY ADHESIVE & GROUT is classified as a R1T adhesive (normal reaction resin adhesive (R1), slip resistant (T), adhesive).

TECHNICAL DATA – Chemical Resistance

TAL EPOXY ADHESIVE & GROUT, when fully cured, is resistant to the following :

PRODUCTS	CHEMICAL	MAX CONCENTRATION
1. ACIDS	Citric Acid	10%
	Tartaric Acid	10%
	Oxalic Acid	10%
	Lactic Acid	5%
	Acetic Acid	3%
	Other Acid	3%
	Alkali	5%
2. ALKALIS	Hydroxides	10%

TAL EPOXY ADHESIVE & GROUT shows poor resistance to :

Acetone	Perchloroethylene
Benzene	Tetrahydrofuran
Carbon Tetrachloride	Toluene
Chloroform	Trichloroethane
Chromic Acid	Trichloroethylene
Methylene Chloride	Xylene
Oleic Acid	

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

Important Notice:

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The substrate must have a moisture content of 5% 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% (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. 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 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.

The substrate must be completely flat and level as TAL Epoxy Adhesive & Grout cannot be built up to compensate for any variances in levels in the substrate.

PRIMING

Woodfloated (rough, porous) Surfaces

- Prime the surface with TAL X-TECH EPOXYBOND LV. Add the Hardener into the Base and mix using a slow speed drill (350rpm) with a suitable mixing paddle attachment for 3 minutes, or until both components have fully dispersed and the mix is uniform in colour. Be sure to rotate the mixer throughout the drum. **Mix only complete full kits.** The mixed Primer is useable for about 3 hours at 20°C and 1½ hours at 30°C.

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- Apply a single coat onto the clean, firm substrate using a brush or roller, taking care to work the mixed material well into the substrate. Ensure a uniform coating is achieved and make sure no ponding occurs when applied horizontally. **TAL EPOXY ADHESIVE & GROUT must be applied within 8 HOURS at 20°C and 4 HOURS at 30°C after the X-TECH EPOXYBOND LV application.**

Powerfloated or Steelfloated (smooth, dense) Surfaces

- **Smooth, dense surfaces do not need to be primed prior to the application of TAL EPOXY ADHESIVE & GROUT.**

MIXING

Mechanical mixing is recommended for good mixing and uniform dispersion of product. Incorrect or inadequate mixing will result in non-curing of the epoxy.

Never attempt to use part portions of the 3 components. It is essential not to mix more adhesive kits than can be used within 1 hour.

There are 3 components to this product – 1. Resin 2. Hardener 3. Filler (powder)

Using a mechanical mixer, empty **ALL** the contents of the Resin and Hardener containers into the bucket supplied (**adding the Resin first, then the Hardener**), and mix thoroughly at a low speed for 1 minute. Add the Filler (powder) component very slowly whilst mixing and mix thoroughly at a low speed, scraping down the sides, until the mix 'wets out' and a uniform colour and consistency is achieved.

After mixing the product is useable for approximately 1 hour at 20°C, after which time any portion unused must be discarded.

NB :

- **It is essential not to mix more adhesive kits than can be used within 1 hour.**
- **In hot conditions the pot life and working time will be shorter.**
- **The epoxy will take longer to cure at temperatures below 10°C.**

APPLICATION

Working in temperatures between 10°C and 25°C, apply the adhesive to the primed substrate using a NOTCHED FLOOR TROWEL to ensure a solid bed of adhesive of 3 – 5mm thick beneath the tiles.

Bed dry, clean tiles firmly into the wet adhesive with a twisting action to ensure full contact with the adhesive. Tap tiles home well with a rubber mallet or wooden trowel handle. Remove the occasional tile to ensure that good contact has been achieved.

Remove surplus epoxy from the face of the tiles immediately. Clean the face of the tiles using a cloth or sponge dampened with TAL EPOXY CLEANING FLUID, before the epoxy dries.

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 adhesive to cure.

We recommend a minimum of 3mm wide between ceramic wall tiles and porcelain tiles, and 5mm wide between ceramic floor tiles. (Refer to tile manufacturer for recommended joint width.)

The grouting can be done in one step with the bedding of the tiles, or can be done as a second application once the adhesive has set (using TAL EPOXY ADHESIVE & GROUT or TAL INDUSTRIAL EPOXY GROUT). Wipe excess grout off immediately to avoid epoxy residue on the tiles.

Important :

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

Take care when applying TAL EPOXY ADHESIVE & GROUT not to scratch the face of soft glazed tiles, highly polished tiles or glass tiles.

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Ensure that heavy and/or large format tiles to vertical surfaces (resin bonded listellos, bullnosing, step tiles, etc) are well supported by means of a batten or some type of mechanical device until such time that the adhesive has set sufficiently to support the weight of the tile. Allow for 6 – 8 HOURS, depending on ambient conditions.

The installation should not be subjected to normal service conditions until the epoxy is set sufficiently : 24 – 48 hours for *light* service conditions, and 7 days for maximum chemical resistance. Should the epoxy be exposed to water, cleaning agents, etc before full cure has taken place the integrity and performance of the product will be compromised.

Note : When installing resin-bonded products the grout joints should be a minimum of 5mm wide, and tile panel movement joints should be located at closer centres.

CLEANING

NOTE : CLEANING OF EPOXY ADHESIVE & GROUT RESIDUES SHOULD BE DONE BEFORE THE EPOXY HAS CURED. CURED EPOXY IS IMPOSSIBLE TO REMOVE.

Any epoxy residue on the tile face must be removed **before it hardens** using a cloth or sponge dampened with TAL EPOXY CLEANING FLUID, cleaning the cloth/sponge regularly in a bucket of clean, soapy water.

Excessive water must be avoided as it will result in non-curing of the epoxy.

TAL EPOXY CLEANING FLUID should be used to clean off uncured TAL EPOXY ADHESIVE & GROUT residues from the surface of tiles during or immediately after the epoxy application.

TAL EPOXY CLEANING GEL can be used to clean off TAL EPOXY ADHESIVE & GROUT residues which have inadvertently been left on the face of the tiles overnight.

Due care must be taken to apply the cleaner to the face of the tile only as it will affect the grout in the joints.

NOTE : Greater care may be required with some types of tiles, ie those with textured surfaces, unglazed and quarry tiles.

GROUTING

Allow at least 6 - 8 hours after completing the tiling before grouting, depending on atmospheric and site 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 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.

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TEMPERATURE RESISTANCE

TAL EPOXY ADHESIVE & GROUT will withstand service temperatures within the range of -30°C up to 50°C for prolonged periods, and up to 100°C for short periods. The product is suitable for use in installations where tiling will be subjected to steam cleaning.

COVERAGE

Approximately 4kg/m² when applied in a solid bed of 4mm thickness. Actual coverages will be determined by site conditions, workmanship, etc.

PACKAGING

TAL EPOXY ADHESIVE & GROUT is available in 5kg buckets.

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. THE USE OF RUBBER GLOVES AND PROTECTIVE GOGGLES IS RECOMMENDED WHEN WORKING WITH THIS PRODUCT. WORK IN A WELL VENTILATED AREA. DISPOSE OF THIS PRODUCT IN ACCORDANCE WITH LOCAL REGULATIONS. CONTACT TAL FOR FURTHER HEALTH AND SAFETY INFORMATION.

As certain people are prone to dermatitis when using epoxy resins it is advisable to use rubber gloves. Any material coming into contact with the skin should be washed off promptly and thoroughly with soap and water. In the case of eye contact, wash immediately with copious amounts of water and seek medical attention.

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.

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

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

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