

**DESCRIPTION**

TAL SCREEDMASTER is a single-component high-performance self-levelling and smoothing underlayment manufactured from rapid-setting shrinkage-compensated cement and selected aggregates designed with high flow properties when added to water to produce a smooth, flexible and hard wearing floor surface prior to the fixing of floor coverings with minimum installation time.

Floor coverings can be fixed after 24 hours, depending on application thickness and ambient conditions, once the moisture content of the floor has been tested and confirmed suitable to receive the intended floor covering.

**TAL SCREEDMASTER does not contain casein** (or other protein bearing additives), making it ideal for hygiene applications such as hospitals and food preparation/storage areas.

**TAL SCREEDMASTER is only suitable for underlayment applications. If a durable floor covering is not going to be installed over the TAL SCREEDMASTER application, then a protective coating must be applied over the cured SCREEDMASTER.**

Although TAL SCREEDMASTER was developed as a self-levelling product, it must be noted that the success of the installation is dependent on the correct background preparation, Floor Level Surveys, and correct mixing and application procedures (see details in relevant sections below).

**NOTE :**

- **All surface beds should have a damp proof membrane, and all substrates must attain moisture levels of 5% (75% RH) or less before the application of TAL SCREEDMASTER polymer-modified underlayment can commence.**  
**Should there be no damp proof membrane below a surface bed, or should prevailing moisture levels not attain 5% (75% RH) or less then TAL X-CALIBUR X-SHIELD VAPORSTOP HB must be applied before the application of TAL SCREEDMASTER. X-SHIELD VAPORSTOP HB is a moisture tolerant, 100% solids epoxy barrier coat that prevents the passage of water vapour and moisture through concrete slabs into the underlayment layer.**  
**Please contact TAL for a specification for the application of X-SHIELD VAPORSTOP HB if required.**
- **For optimum product performance the Slab, Water and Ambient Temperatures should be around 20°C. However, if this is not possible, the information below should be used as a guide for product installation :**
  - **Ambient temperatures between 10°C - 30°C must be maintained throughout installation and curing.**
  - **The Floor Slab must have a minimum temperature of 10°C during the SCREEDMASTER application.**
  - **The temperature of the Water must be between 15 - 25°C when mixed with SCREEDMASTER.**
  - **Low Floor Slab and/or Ambient temperatures and Water temperatures will have a detrimental effect on the curing of the TAL SCREEDMASTER, ie full cure will never be achieved.**
  - **High Floor slab and/or Ambient temperatures and Water temperatures will result in flash-setting of the TAL SCREEDMASTER and the product will not be workable.**

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- TAL SCREEDMASTER is suitably designed for application onto concrete and screeded substrates. These substrates should be integrally sound (no crumbling, cracking, etc) and of a quality and consistency suitable for screeding. TAL cannot be held liable should the underlayment installation be compromised as a result of failure or debonding (cohesive failure) occurring within the subsurface.  
Moisture and pull-off tests must be conducted on the cured underlayment layer by the flooring contractor prior to installing vinyl flooring and epoxy floor coatings/coverings.

### **AREAS OF APPLICATION**

**TAL SCREEDMASTER** is suitable for levelling and smoothing :

- uneven concrete or sand/cement floor surfaces
- terrazzo, concrete or ceramic tiles
- old, rough concrete surfaces
- rigid metal
- spalled concrete surfaces
- revamping of floor coverings

**TAL SCREEDMASTER** is suitable to be used as an underlayment prior to fixing the following floor coverings with a suitable adhesive :

- vinyl tiles and vinyl sheeting
- marmoleum and rubber
- ceramic tiles
- stick down and stretch carpeting
- parquet and wood flooring, including laminated flooring
- epoxy floor coatings
- indoor sports floor coverings (such as netball, soccer and tennis)

Advantages of **TAL SCREEDMASTER** are :

- fast track installation, reducing labour costs and installation time
- minimal sanding or grinding required, reducing dust
- shrinkage compensated, ensures installations from 3mm to thickness of 16mm with no cracking
- trafficable (**light** foot traffic) after only 3 hours
- high strength, ensuring hardwearing durable surface suitable for use in high traffic areas
- can be installed either manually or pumped for large contracts or upper level floors
- fix floor coverings after only 24 hours, depending on application thickness and ambient conditions

### **Classification According to EN13813**

TAL SCREEDMASTER is classified as a polymer-modified CT-C25-F5 screed (cementitious screed (CT) with a compressive strength (C) of minimum 25 N/mm<sup>2</sup> (MPa) and a flexural strength (F) of minimum 5 N/mm<sup>2</sup> (MPa)).

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**TECHNICAL DATA**

Type	Modified cement-based underlayment
Colour	Grey
Setting Type	Rapid setting
Pot life*	30 – 60 minutes
Open Time* (Working time after mixing)	20 minutes
Initial Set*	Minimum 1 hour
Trafficable ( <i>light</i> ) after*	3 hours
Floor covering installation*	After 24 hours, depending on application thickness and ambient conditions
Compressive Strength (28 Days)	25 – 30 MPa
Flexural Strength (28 Days)	5 – 9 MPa
Water temperature	15°C - 25°C
Application temperature range (ambient)	10°C - 30°C
Slab temperature	10°C - 30°C
Temperature Resistance	+5°C - +60°C
Mixing ratio	22kg / 5ℓ
Min application thickness	3mm
Max application thickness	16mm
Density	1.80
Pack size	22kg

\*At 25°C and 50% relative humidity.

**SURFACE PREPARATION**

**Allow all new concrete work and screeds to cure for at least 6 weeks and 4 weeks respectively before proceeding. All concrete work and screeds must have a moisture content of 5% (75% RH) or less before the levelling application can be commenced.**

The substrate must be structurally sound, clean and dry and free from all traces of surface laitance and contamination such as dust, dirt, waxes, oils, bitumen, old adhesives, paint, grease, weak cement screeds, shutter release and curing agents, sealing compounds, etc. All damaged, defective, deteriorated, friable (powdery) and hollow sounding areas must be removed until a solid background is achieved. These areas must be made good before proceeding.

Bituminous compounds must be removed completely. Organic or fungal growth must be removed and the spores killed using an effective fungicide.

All holes or voids in the floor must be identified and filled with TAL RAPIDFIX, and all "highs" or trowel marks must be identified and ground down.

Powerfloated, dense and impervious concrete should be prepared as follows :

**Application Thickness 5mm or Less :**

- The substrate must be suitably prepared to open the surface and to expose the aggregate, preferably by captive sandblasting, to achieve a Concrete Surface Profile (CSP) value of 2 - 3 (Light).

**Application Thickness Exceeding 5mm :**

- The floor surface must be thoroughly scabbled or scarified in cross-directions to a Concrete Surface Profile (CSP) value of 5 - 6 (Medium Scarification), or to ensure that the aggregate in the concrete is fully exposed and open.

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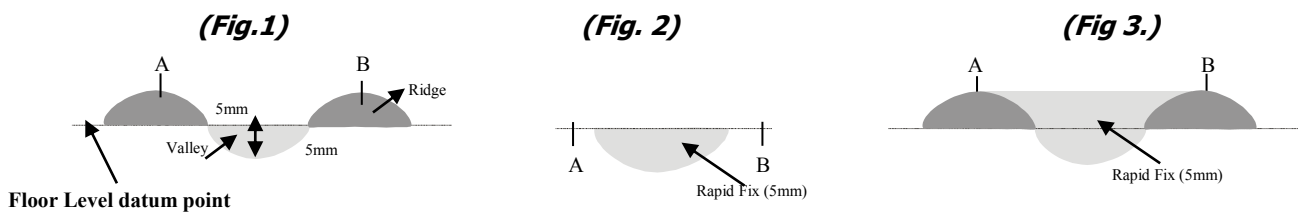
**FLOOR LEVEL SURVEY / FLOOR TOLERANCES**

The success of an installation is highly dependent on the background conditions and the quality of the background preparations before pouring the TAL SCREEDMASTER.

Since these installations are normally 3 – 5mm in thickness, it is important to ensure all highs and lows are identified and addressed before applying TAL SCREEDMASTER.

The use of a 3m straight edge is recommended. In identifying the highs and lows the straight edge should be placed down and rotated through 360° around the centre point. This ensures that valleys and ridges are identified together with occasional highs and lows.

Floor Preparation Example



The illustration (Fig. 1) above shows a maximum and a minimum of 5mm in the levels. Thus between A and B a minimum of 10mm of product has to be poured to get the floor to the level of the highs at A and B.

Fig. 2: must be applied where there are limitations in the final levels.

Fig. 3: must be applied where there is more room to build on the existing levels.

Since TAL SCREEDMASTER is normally applied with a notched rake giving final thickness of 3 - 5mm it is thus important to ensure that the highs are ground (Fig. 2) or the lows are filled up using TAL RAPIDFIX (Fig. 3), normally to the floor level (datum point), before applying the SCREEDMASTER.

TAL RAPIDFIX should be applied as follows :

- Prime these areas with a slurry consisting of 1 part TAL FLOORKEY to 2 parts TAL RAPIDFIX (by volume), which is applied by block brush.
- Add TAL RAPIDFIX to clean water and mix until the desired trowelable paste is achieved, which must be lump-free and creamy. Do not mix up more than can be used in 20 minutes. Stir occasionally whilst in use. Apply the paste to the area using a steel trowel and work to a smooth level surface. TAL RAPIDFIX can be applied from 1mm up to 50mm in a single application
- Allow these areas to dry overnight before proceeding, depending on application thickness and ambient conditions..

Enough product should always be applied to cover the lows and highs in the existing screed as these manifest themselves as undulations once floor coverings, especially vinyl sheeting, are applied.

Experienced personnel normally use the TAL ADJUSTABLE FLOOR SPREADER which reduces the amount of work required in the preparation stage, since with the SPREADER thicknesses above 10mm can be achieved in one application. The bubble bursting stage is eliminated in this case.

**CONSTRUCTION JOINTS / VOIDED JOINTS**

**Existing Joints :**

All construction/cold joints and structural joints in the substrate, as well as structural cracks which may be dynamic before and/or after the TAL SCREEDMASTER installation, must be extended through to the surface of the screed application in the form of voided joints. With regards to these voided joints already in the concrete slab, the full width of the joint should be maintained and extended through the screeds to the surface.

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All voided joints in the substrate, including saw cuts, must be filled with TAL SEALMASTER CORD prior to the TAL SCREEDMASTER application to prevent these joints from being filled with screed.

**New Joints :**

Bay divisions and construction joints should be incorporated in the screeds as for normal sand/cement screeds in accordance with the SABS/SANS Code of Practice, and in accordance with the Project / Site Engineer's recommendations.

Voided joints should also be located around the perimeter of all floors, against obstructions fixed to the structural background, and around all protruding fixtures such as walls, columns and stairs.

**PRIMING**

The floor must be thoroughly swept to remove all traces of dust and loose particles. (**Vacuuming is preferred.**) **The substrate must have a moisture content of 5% (75% RH) or less before proceeding.**

- **Woodfloated (rough, porous) Surfaces**

Prime the surface with 2 coats of TAL FLOOR PRIMER. The second coat must be applied in a cross-direction to the first coat, once the first coat has dried.

**NOTE :** Very porous floors may require more applications of TAL FLOOR PRIMER, and each coat should be applied in a cross-direction to the previous application once the previous coat is touch dry.

The TAL FLOOR PRIMER application must be allowed to cure for **12 hours** before the TAL SCREEDMASTER installation is commenced.

- **Powerfloated / Steelfloated (smooth, dense) Surfaces**

Prime the surface with TAL FLOORKEY slurry consisting of 1 part TAL FLOORKEY mixed with 2 parts TAL RAPIDFIX (by volume) which is applied by block brush, ensuring that the entire surface is covered with the slurry priming coat.

Once the TAL FLOORKEY slurry coat is dry and well anchored to the substrate, a coat of TAL FLOOR PRIMER must be applied.

The TAL FLOOR PRIMER application must be allowed to cure for **12 hours** before the TAL SCREEDMASTER installation is commenced.

**NOTE : Failure to allow the TAL FLOOR PRIMER coat to cure for 12 hours will result in bubbles / pinholes forming in the TAL SCREEDMASTER installation during the drying stage.**

**MIXING**

TAL SCREEDMASTER is suitable to be applied either manually or by use of a pump.

**Manual Method**

Add 22kg TAL SCREEDMASTER to 5 litres of clean, cool water while stirring slowly with an electric drill of at least 1.1 Kilowatts with a mixing paddle attachment. **The temperature of the water must be between 15 - 25°C when mixed with SCREEDMASTER.** The mixing process and application should be continuous. Mix thoroughly for 5 minutes until a smooth, lump-free viscous liquid is achieved. Allow the mix to stand for 3 minutes, and then stir again for 1 minute. Stir occasionally whilst in use. **Do not add more than the stipulated amount of water.** Do not mix up more than can be used in 20 – 30 minutes.

**Pump Method**

Please refer to flooring contractor for mixing methods. **(The temperature of the water must be between 15 - 25°C when mixed with SCREEDMASTER.)**

**NB : Never add more liquid to a mix which has been left standing for too long (retempering) as this will compromise the integrity of the screed.**

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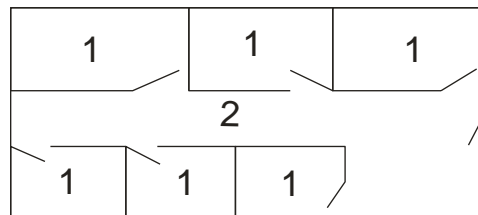
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**APPLICATION**

Pour the mix onto the floor and spread with a TAL NOTCHED FLOOR RAKE or TAL ADJUSTABLE FLOOR SPREADER to the required thickness. (The size of the notch of the TAL FLOOR RAKE or the height adjustment of the TAL ADJUSTABLE FLOOR SPREADER will determine the thickness.)

TAL SPIKED SHOES must be worn during the installation. Roll the area using a TAL SPIKED ROLLER to facilitate the release of any trapped air to produce a smooth surface, and allow to dry.

TAL SCREEDMASTER can be applied from 3mm up to 16mm in a single operation. It is recommended to apply TAL SCREEDMASTER in thicknesses exceeding 3mm to achieve optimum results. Clean tools immediately after use with clean, cool water.



Ideally, all doors should be removed. Doorways should be blocked off with foam tape. It is normally recommended to apply TAL SCREEDMASTER before skirting boards have been installed. If boards are in place already, these should be covered with masking tape to avoid staining with product. Apply product starting with all rooms (1) and ending with the passages (2). Bigger rooms or areas could be subdivided into smaller areas using foam tape. This reduces the risk of cold joints. Once product has set, the foam tape should be removed and all channels left behind should be filled with TAL SCREEDMASTER, and subsequently sanded down once set.

Note: Any lumps or unmixed product should be removed while product is still wet, normally done during the bubble bursting stage of the installation.

Should a further build be required, this can be done once the first application has cured for 24 hours. The surface must be primed with 2 liberal coats of TAL FLOOR PRIMER. The second coat must be applied in a cross-direction to the first coat once the first coat has cured. The TAL FLOOR PRIMER application must be allowed to cure for **12 HOURS** before the next layer of TAL SCREEDMASTER is applied.

**DRYING TIMES**

New screeds should be protected from other building operations and trades until fully cured.

The surface can be subjected to **light** foot traffic after 3 hours (depending on application thickness and ambient conditions).

Floor coverings can be fixed after 24 hours, depending on application thickness and ambient conditions, once the moisture content of the floor has been tested and confirmed suitable to receive the intended floor covering. Any moisture trapped below vinyl flooring or other coatings may result in the vinyl flooring or coating 'bubbling'.

Before floor coverings are installed a further Floor Level Survey should be carried out on the floor using a 3m straight edge, as before. Any 'highs' must be identified and removed by rubbing using a corundum stone. Any 'lows' must be filled using TAL SUPERSCREED mixed with TAL SCREEDBINDER (replacing the water in the mix).

**SURFACE FINISH**

Variation in colour can occur due to the laying technique used (ie trowel marks and water marks). As an underlayment, TAL SCREEDMASTER is compatible with most commonly used adhesives and soft floor finishes as well as with hardwood flooring, tiles and athletic flooring.

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**COVERAGE**

Coverage is approximately 1.8kg / m<sup>2</sup> / mm thickness (ie a 22kg bag will cover approximately 4m<sup>2</sup> at a 3mm build).

**PACKAGING**

TAL SCREEDMASTER is available in 22kg 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 6 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 AND SAFETY INFORMATION.**

**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](mailto:taltech@norcrossa.com)

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