

Thursday, 31 July 2014

## **GENERAL SPECIFICATION FOR THE APPLICATION OF TAL SCREEDMASTER SMOOTHING COMPOUND (MINIMUM BUILD 3mm) AS AN UNDERLAYMENT PRIOR TO INSTALLING RESILIENT FLOOR COVERINGS**

Please note that 'general' specifications are issued for information purposes, and should not be used as project specifications.

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.

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

### **TAL PRODUCT REQUIREMENTS**

The TAL products required for this installation are as follows

TAL RAPIDFIX

TAL FLOOR PRIMER

TAL FLOORKEY

TAL SCREEDMASTER

TAL 10mm NOTCHED FLOOR RAKE / TAL ADJUSTABLE FLOOR SPREADER

TAL SPIKED SHOES

TAL 12mm SPIKED ROLLER

TAL PROFIX PLUS

**Special note must be taken of the following :**

- **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 and correct mixing and application procedure. Very low or very high ambient conditions can also have an adverse effect on the installation.
- **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, A POLYMER-MODIFIED UNDERLAYMENT, CAN COMMENCE.**  
Should there be no damp proof membrane below a surface bed, or should prevailing moisture levels not attain 5% or less then TAL X-CALIBUR X-SHIELD VAPORSTOP HB must be applied before the application of TAL SCREEDMASTER. TAL X-CALIBUR X-SHIELD VAPORSTOP HB is an extremely 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 X-CALIBUR 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.

**1. BACKGROUND PREPARATION**

- 1.1 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% or less before the levelling application can be commenced.
- 1.2 When screeding directly onto concrete, ensure that the surfaces are clean and free of all traces of curing agents, laitance and any other surface contaminants, by mechanically abrading the substrate. **The floor surface must be thoroughly scabbled or scarified in cross-directions to a Concrete Surface Profile (CSP) value of 6 (Medium scarification), or to ensure that the aggregate in the concrete is fully exposed and open.**

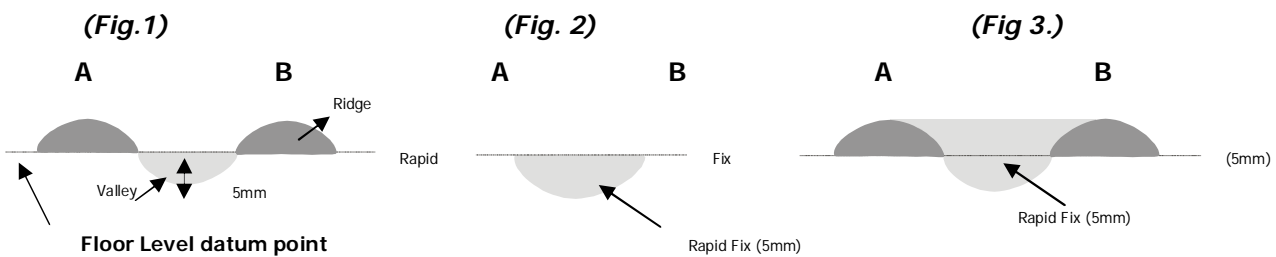
- 1.3 The substrate must be structurally sound, clean and dry and free from all traces of surface laitance and contamination such as dust, dirt, waxes, oils, bitumen, old adhesives, paint, grease, weak cement screeds, shutter release and curing agents, sealing compounds, etc. All damaged, defective,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

**2 EXISTING JOINTS**

- 2.1 All construction/cold joints and structural joints in the background, as well as structural cracks which may be subjected to movement after the SCREEDMASTER installation, must be extended through to the surface of the screed application in the form of voided joints. With regards to these existing joints already in the concrete slab, the full width of the joint should be maintained and extended through the screed to the surface.
- 2.2 All 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.

**3 FLOOR LEVEL SURVEY/ FLOOR TOLERANCES**

- 3.1 The success of an installation is highly dependent on the background conditions and the quality of the background preparations before pouring the TAL SCREEDMASTER.
- 3.2 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.
- 3.3 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.
- 3.4 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.

- 3.4.1 Since TAL SCREEDMASTER is normally applied with a notched rake giving final thickness of 5 - 8mm 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 :
- 3.4.2 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.
- 3.4.3 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.
- 3.4.4 Allow these areas to dry overnight, ideally to moisture levels below 5%, before proceeding.
- 3.5 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.
- 3.6 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.

#### **4. PRIMING**

- 4.1 The floor must be swept to remove all traces of dust, debris and loose particles. (Vacuuming is preferred.)
- 4.2 **THE SUBSTRATE MUST HAVE A MOISTURE CONTENT OF 5% OR LESS BEFORE PROCEEDING.**
- 4.3 **Woodfloated (rough, porous) Surface**
  - 4.3.1 Prime the surface 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 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.
  - 4.3.2 The TAL FLOOR PRIMER application must be allowed to cure for **12 HOURS** before the TAL SCREEDMASTER installation is commenced.
- 4.4 **Powerfloated / Steelfloated (smooth, dense) Surface**
  - 4.4.1 Prime the surface with a slurry consisting of **1 part TAL FLOORKEY mixed with 2 parts TAL RAPIDFIX (by volume)**, which is applied by block brush.
  - 4.4.2 Ensure that the TAL FLOORKEY slurry coat has dried completely and is firmly anchored to the substrate before applying a coat of TAL FLOOR PRIMER.
  - 4.4.3 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.**

## 5. MIXING

### 5.1 **Mixing – Manual Method**

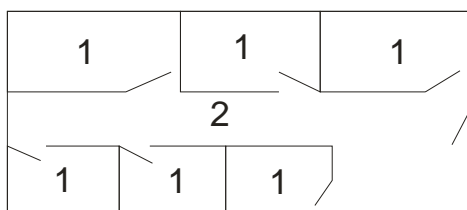
5.1.1 Add 22kg TAL SCREEDMASTER to 5 litres of clean water while stirring slowly with an electric drill of at least 1.1 Kilowatts with a mixing paddle attachment. **THE TEMPERATURE OF THE WATER MUST BE BETWEEN 15 - 25°C WHEN MIXED WITH THE SCREEDMASTER.** The mixing process and application should be continuous. Mix thoroughly for 5 minutes until a smooth, lump-free paste is obtained. Allow the mix to stand for 3 minutes, and then stir again for 1 minute. Stir occasionally whilst in use. **DO NOT OVER WATER THE MIX.** Do not mix up more than can be used in 20 – 30 minutes.

### 5.2 **Mixing – Pump Method**

5.2.1 Please refer to flooring contractor for mixing methods. **(THE TEMPERATURE OF THE WATER MUST BE BETWEEN 15 - 25°C WHEN MIXED WITH THE SCREEDMASTER.)**

## 6. SCREEDMASTER APPLICATION

- 6.1 Pour the mix onto the floor and spread with a TAL NOTCHED FLOOR RAKE or a 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.)
- 6.2 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 to allow it to dry.
- 6.3 TAL SCREEDMASTER should be applied in thicknesses exceeding 3mm to obtain optimum results. TAL SCREEDMASTER can be applied up to 16mm thick in a single operation.
- 6.4 All construction / cold joints and structural joints in the background must be extended through the screed layer to the surface in the form of voided joints. With regards to structural joints, the full width of the structural joints must be respected and extended through the screed to the surface.
- 6.5 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.
- 6.6 In addition to the above, if the TAL SCREEDMASTER application thickness is to be 10mm or greater, bay divisions and voided construction joints should also be incorporated in the screed layer as for normal sand/cement screeds and toppings in accordance with the SABS/SANS Code of Practice.



- 6.7 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.
- 6.8 **Note:** Any lumps or unmixed product should be removed while product is still wet, normally done during the bubble bursting stage of the installation.

- 6.9 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.

## **7. DRYING TIMES & SURFACE FINISH**

- 7.1 New screeds should be protected from building operations and other trades until fully cured.
- 7.2 The floor must be left to cure for 24 hours, depending on site and ambient conditions. 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).
- 7.3 A moisture test must be conducted by the flooring contractor prior to installing vinyl floor coverings or epoxy coatings, as any moisture trapped below the flooring may result in the installation 'bubbling'.

## **8. RESILIENT FLOORING INSTALLATION**

- 8.1 Carpet and vinyl floor coverings can be installed using TAL PROFIX PLUS, a modified high performance aggressive acrylic adhesive specially designed for the installation of vinyl and textile (carpet) floor coverings including floor coverings with exceptionally coarse backings eg. needle punch carpeting, coir carpeting, etc. (TAL PROFIX PLUS is NOT suitable for adhering carpeting that has been coated with a rubber or bitumen based wear-under layment.)
- 8.2 Stir well before use. TAL PROFIX PLUS should be applied using a serrated trowel to ensure optimum transfer of adhesive, as follows :
  - Vinyl tiles and sheeting and backed carpeting** - serrated trowel with triangular notches of 1.5mm x 1.5mm with 4mm centres
  - Coarse, unbacked carpeting (eg needlepunch carpeting)** - serrated trowel with triangular notches of 3.0mm x 3.0mm with 4mm centres
- 8.3 Allow the adhesive to flash off and become slightly tacky before applying the floor covering. Press the floor covering into place and roll all flooring (except cushion flooring) with a 64kg three sectional flooring roller.

Should you require any further assistance or have any queries regarding the above, please do not hesitate to contact us. Assuring you of our best attention at all times.

Yours sincerely

**SHARON MARGON**  
**TECHNICAL ADVICE SUPERVISOR**

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