SUPERSCREED SL

Revision Date 20 DECEMBER 2021



General Purpose Method Statement

1. Labour

Application of **TAL Superscreed SL** self-levelling and smoothing Underlayment Compound is a skilled operation and should only be carried out by experienced and competent artisans with the correct training. Application by unskilled labour is not recommended.

2. Tools & Equipment Required

Broom & Heavy Duty Vacuum Cleaner

Mechanical Mixer, ie minimum 1.8kW drill with suitable paddle mixer

Large Clean Container for mixing

3m Straight Edge

Coarse Sandpaper or Corundum Stone

Builders Block Brush

TAL Adjustable Floor Spreader / TAL Notched Floor Rake

TAL Spiked Shoes

TAL Spiked Roller

TAL Floor Primer – primer for rough, porous surfaces

TAL Floorkey + TAL Rapidfix – primer for smooth, dense surfaces

TAL Screedbinder - additive

3. Surface Preparation

Allow all new concrete work and screeds to cure for at least 6 weeks and 4 weeks respectively before proceeding. The substrate must attain a moisture content of 5% (75% RH) or less before the TAL Superscreed SL application can be commenced.

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 VaporStop HB** must be applied before the application of **TAL Superscreed SL**. **TAL VaporStop HB** is a moisture tolerant, 100% solids epoxy barrier coat that prevents the passage of water vapour and moisture through concrete slabs.

TAL Superscreed SL is suitably designed for application onto concrete and screeded substrates. Any Screeding or Topping must be firmly bonded to the underlying concrete, and the substrate must be of sufficient strength, with a minimum acceptable compressive strength of 25MPa and tensile strength of 1.5N/mm². The substrate must 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.

The substrate must be 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.

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

4. 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 applying **TAL Superscreed SL.**

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 Superscreed SL.**

Contact the TAL Technical Advice Centre on 0860 000 TAL(825), or e-mail taltech@tal.co.za

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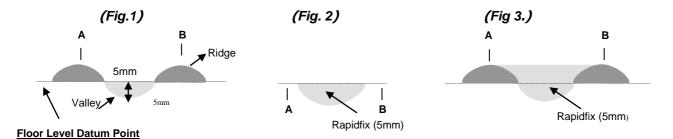
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The use of a 3m straight edge is recommended. In identifying the highs and lows the straight edge should be placed down and rotated through 360° around the centre point. This ensures that valleys and ridges are identified together with occasional highs 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 Superscreed SL** is normally applied with an adjustable floor spreader or notched floor rake giving final thickness of 3 - 5mm it is thus important to ensure that the highs are ground down (Fig. 2) or the lows are filled up using **TAL Rapidfix** (Fig. 3), normally to the floor level (datum point), before applying the **Superscreed SL**.

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 20kg TAL Rapidfix to no more than 5 litres of clean, cool water (or TAL Screedbinder) 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.

5. Voided Joints

5.1 Existing Joints

All Construction/Cold Joints in the substrate, as well as structural cracks that are, or could become, dynamic before and/or after the **TAL Superscreed SL** installation, must be extended through to the surface of the **TAL Superscreed SL** installation in the form of Voided Joints.

All specially constructed Voided Joints (Including Structural) in the Substrate, must be filled with **TAL Sealmaster Cord** prior to the **TAL Superscreed SL** application to prevent these joints from being filled with **TAL Superscreed SL**. With regards to these Voided Joints already in the existing substrate, the full width of the joint should be maintained and extended through the **TAL Superscreed SL** layer to the surface. These joints need to be aligned exactly.

Relief/Saw Cut Joints in the existing substrate can only be filled with **TAL Superscreed SL** if the substrate has not cracked in these areas. If these Relief/Saw Cut Joints have in fact cracked in these areas, then these Joints need to be respected as above.

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5.2 New Joints

Should the **TAL Superscreed SL** application thickness be 10mm or greater, bay divisions and voided construction joints should also be incorporated in the **TAL Superscreed SL** layer as for normal sand/cement screeds and toppings in accordance with the SANS Code of Practice **and** in accordance with the **Project/Site Engineer's recommendations**.

These Voided Joints must extend from the Substrate through the **TAL Superscreed SL** layer and must be a minimum of 3mm in width. Panels must be neatly defined and straight when being placed.

6. Substrate Priming

The floor must be thoroughly swept to remove all traces of dust and loose particles, taking care to remove the dust rather than redistribute it. (Vacuuming is preferred.)

The substrate must attain 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, ensuring that the entire surface is covered with the priming coat. 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 Superscreed SL installation is commenced.

• Powerfloated / Steelfloated (smooth, dense) Surfaces - 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, ensuring complete coverage of the substrate.

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 Superscreed SL 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 Superscreed SL installation during the drying stage.

7. Mixing

It is imperative that the water: powder mix ratio is strictly adhered to.

Add 20kg TAL Superscreed SL to <u>exactly 5 litres</u> of clean water while stirring slowly with an electric drill of minimum 1.8kW with a mixing paddle attachment, and mix thoroughly for 5 minutes until a smooth, lump-free viscous liquid is obtained. Allow the mixture to stand for 3 minutes, then stir again (shear thinning). The temperature of the water must be between 15 - 25°C when mixed with Superscreed SL. Stir occasionally whilst in use.

Do not mix up more than can be used in \pm 1 Hour (Pot Life). For best results use a full bag in one mix.

When mixed with **TAL Screedbinder** (as a total water replacement) it becomes excellent for use as a protective barrier over under tile heating elements. The addition of **TAL Screedbinder** could however affect the flow characteristics and self-levelling properties of **TAL Superscreed SL**.

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 TAL Superscreed SL.

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8. Application Conditions

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 **TAL Superscreed SL** application.
- The temperature of the Water must be between 15 25°C when mixed with TAL Superscreed SL.
- Low Floor Slab and/or Ambient Temperatures and Water Temperatures Temperatures will affect the Setting Time (Very Low Temperatures, ie below 5°C, will considerably slow, or even halt, the curing process, until temperatures increase again).
- High Floor Slab and/or Ambient Temperatures and Water Temperatures will shorten the Working Time (Very High Temperatures may result in flash-setting of product).

Important:

Too-rapid drying from direct sunlight and/or drying air or winds during application, and within the first 48 hours of curing, will result in drying-shrinkage cracks forming in the self-levelling screed.

Ensure that all roofs are in place, all windows and doorways are suitably masked/covered, and that any air-conditioning units are not used.

9. Application

Provision (Soft board/Foam) to allow Voided Joints in the **TAL Superscreed SL** should so be created around the perimeter of all floors, against obstructions fixed to the structural background, and around all protruding fixtures such as walls, columns and stairs prior to pouring the Compound.

Pour the mix onto the floor and spread with a TAL Adjustable Floor Spreader or TAL Notched Floor Rake to the required thickness. (The height adjustment of the TAL Adjustable Floor Spreader or notch of the TAL Notched Floor Rake 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 Superscreed SL can be applied from 1mm up to 12mm in a single operation. It is recommended to apply **TAL Superscreed SL** in thicknesses exceeding 3mm to achieve optimum results. Clean tools immediately after use with clean, cool water.

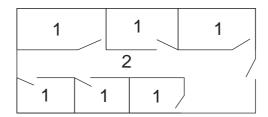
Ideally, all doors should be removed. Doorways should be blocked off with foam tape. It is normally recommended to apply **TAL Superscreed SL** before skirting boards have been installed. If boards are in place already, these should be covered with masking tape to avoid staining with product.

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 Superscreed SL**, and subsequently sanded down once set.

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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 Superscreed SL is applied.

10. **Drying Times & Surface Finish**

The TAL Superscreed SL installation should be protected from building operations and other trades until fully cured. It should also be completely protected until fully covered with a suitable floor covering.

The floor must be left to cure for 24 hours, depending on site and ambient conditions. Before floor coverings are installed it is the Flooring Contractor's responsibility to:

- A) Thoroughly inspect the new TAL Superscreed SL installation and confirm that it is integrally sound and does not show signs of Overwatering and Product Separation;
- B) Conduct a further Floor Level Survey 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 SL mixed with TAL Screedbinder (replacing the water in the mix);
- C) Conduct Moisture Testing on the new surface prior to installing Vinyl or Resin floor coverings, as any moisture trapped below the Vinyl or Resin flooring may result in the installation 'bubbling'.

The new TAL Superscreed SL surface must be thoroughly swept to remove all traces of dust and loose particles before installing any floor coverings. (Vacuuming is preferred.) Contamination on the substrate may have an adverse effect on both the finish and long term performance of the floor

Variation in colour can occur due to the laying technique used (ie trowel marks and water marks).

TAL Superscreed SL is suitable for fixing all floor coverings including semi and fully flexible vinyl tiles and sheeting, carpeting, ceramic tiles, rubber and timber flooring, etc.

11. **Approximate Coverage**

1.8kg / m² / 1mm thickness. (ie a 20kg bag mixed with 5 litres of water will cover approximately 4.6m² at a 3mm build).

Actual coverages will be determined by site conditions, workmanship, etc.

12. Cleaning

Dry powder spillages - sweep off or vacuum powder spillages, ensuring reduced exposure to moisture which potentially activates the product.

Mixed product spillages - scrape up the mixed product, and wipe the surface with a damp sponge before the product dries.

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

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

13. Packaging

20kg Bags

14. Shelf Life & Storage

12 months from date of manufacture when stored in the original unopened packaging in dry internal conditions between 10°C and 30°C and out of direct sunlight. **To protect from damp never store directly on a concrete floor.**

15. Limitations

Do not mix with more than 5 litres of water (or 5.5 litres of TAL Screedbinder)

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

Water temperature must be between 15 - 25°C

Do not mix by hand.

Do not part mix; use only full bags.

Do not apply in wet conditions or at temperatures below 10°C.

Do not expose to running water or to service conditions until the product is cured fully.

TAL Superscreed SL is only suitable for underlayment applications and should be covered with a durable floor covering once cured. TAL Superflow or TAL Stoneflow should be used if an overlayment / decorative screed finish is required.

TAL Superscreed SL is not suitable for external or exposed installation areas.

16. Health and Safety

This product is for use only by trained operatives. It is potentially hazardous if not used correctly. Please refer to the Material Safety Data Sheet (MSDS) prior to the purchase and use of this product. E-mail taltech@tal.co.za or call 0860 000 825 for a copy of the MSDS.

Do not inhale or ingest.

Keep out of reach of children.

Operatives should use barrier creams when handling cementitious materials.

Care should be taken not to allow cementitious products to come into contact with skin.

Operatives should use the following Personal Protection Equipment:

- Eye protection (goggles)
- Gloves
- Dust Mask
- Rubber soled safety shoes
- Coveralls
- Safety helmet

Work in well-ventilated areas.

When using electrical equipment such as mixers ensure that they are properly fused and earthed with the correct plug and sockets fitted.

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Do not use electrical equipment if it will come into contact with water.

Dispose of this product in accordance with local regulations.

17. Authorized Technical Specialist

Please note that only TAL Authorized Technical Specialists are permitted to change any of the information in this method statement or to provide written recommendations concerning the use of this product.

18. Product Guarantee

TAL products are manufactured and tested in accordance with TAL procedures, which are maintained in line with Quality Control System Standard ISO 9001:2015, OSHAS 45001:2018 and Environmental Management System ISO 14001:2018. 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, building movement (cracking, creep, deflection, vibration, etc), design defects, earth tremor or other seismic disturbances, etc, damage to the installed floor by following trades or abusive trafficking, 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 $\underline{\text{prior}}$ to any remedial work whatsoever being carried out.