

## METHOD STATEMENT

### TPS SELF LEVELING FLOOR UNDERLAYMENT



#### 1. INTRODUCTION

TPS Self Leveling Floor Base Coat 25kg is a one part, polymer modified, pumpable self levelling high performance cementitious underlayment for the levelling and smoothing of interior floors prior to the application of the final floor finish such as tiles, carpets, laminated parquet / wood floors, vinyl, etc.

#### 2. REFERENCES

- Manufacturer's Technical Data Sheet for Self-Leveling Underlayment
- BS EN 13813 – Screed Material and Floor Screeds
- ASTM C1708 – Self-Leveling Mortars

#### 3. SUBSTRATE PREPARATION & INSPECTION

- 3.1 Ensure the substrate is sound, clean, and free from oil, dust, laitance, and curing compounds.
- 3.2 Remove weak surfaces by mechanical grinding or shot blasting.
- 3.3 Repair cracks or voids using suitable patching mortar and allow full cure.
- 3.4 Confirm substrate moisture content  $\leq 4\%$  before priming.
- 3.5 Vacuum the surface thoroughly before primer application.

## **4. PRIMER (TPS BONDING AGENT NORMAL) APPLICATION**

4.1 Apply approved TPS BONDING AGENT using roller or brush to seal the substrate and enhance adhesion.

4.2 Ensure complete, uniform coverage with no puddling.

4.3 Allow the primer to dry tack-free (typically 30–60 minutes depending on site conditions).

4.4 If the primer dries too rapidly, the bonding polymers may not properly penetrate the substrate, resulting in a powdery surface. In such cases, apply two coats — the first diluted 1:1 with water, and the second undiluted once the first becomes tacky.

4.5 Proceed with TPS Fibermesh Tape installation immediately after primer surface becomes tack-dry but still receptive.

## **5.0 TPS FIBERMESH TAPE INSTALLATION**

5.1 Apply TPS Fibermesh Tape along all cold joints, cracks, or panel transitions immediately after primer tack stage.

5.2 Press the tape firmly onto the primed surface using a steel trowel or plastic spreader, ensuring full contact and no trapped air.

5.3 Ensure the primer surface is tacky (not glossy dry) when applying the tape. If primer has over-dried, apply a thin recoat to reactivate adhesion.

5.4 Lightly skim over the tape with a thin layer of self-leveling mix (~1–2 mm) using a flat trowel to anchor it. Allow 10–15 minutes partial set before pouring the main layer.

## 6.0 TOOLS & EQUIPMENT

- Mechanical paddle mixer (low-speed, 400–600 rpm)
- Mixing pails (clean interior)
- Gauge rake and smoother trowel
- Spike roller (20–25 mm pin length)
- Measuring pin gauge or laser level
- TPS Fiberglass Tape (50 mm width, alkali-resistant)
- TPS Bonding Agent (Normal) as Primer
- Brush or roller for primer application
- Measuring buckets and PPE

## 7.0 SELF-LEVELING MIXING PROCEDURE

7.1 Mix 25 kg of Self-Leveling Underlayment with 5.5–6.5 L of clean water using a paddle mixer for 2–3 minutes until a smooth, lump-free mixture forms.

7.2 Do not exceed 600 rpm to avoid air entrapment.

7.3 Allow the mix to stand for 1 minute before application.

7.4 Do not add water once initial setting begins in 30minutes.

*\*\* Pot life: Up to 45 minutes after mixing.*

## 8.0 APPLICATION PROCEDURE

- 8.1 Pour the mixed material over the prepared substrate within 20 minutes of mixing.
- 8.2 Spread evenly using a gauge rake to the required thickness (typically 3–6 mm).
- 8.3 Spike roll immediately after spreading (within 5 minutes) to remove air and blend adjacent pours.
- 8.4 During spike rolling, ensure roller pins do not catch or lift the TPS tape by maintaining light pressure and rolling in one direction only.
- 8.5 If tape displacement occurs, re-trowel gently and allow 5–10 minutes for firming before re-rolling.
- 8.6 Maintain wet edge between adjacent mixes within 10 minutes to avoid cold joints.
- 8.7 Allow the surface to self-level naturally; avoid overworking.

## 9. CURING & PROTECTION

- 9.1 Protect the fresh underlayment from strong wind, direct sunlight, and rapid drying for at least 24 hours.
- 9.2 Do not allow foot traffic for minimum 6 hours after application.
- 9.3 Maintain ambient temperature between 10°C and 35°C during curing.
- 9.4 Avoid forced ventilation or direct fans during early curing stage.
- 9.5 For humidity below 50%, cover surface with polyethylene sheet for 4–6 hours after application.
- 9.6 Protect from vibration and heavy loads during early curing



**VIVO RAISER SDN. BHD.**

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## 10.0 QUALITY CONTROL

### Inspection Criteria:

ITEM	INSPECTION METHOD	CRITERIA
Substrate Preparation	Visual & tactile	Sound, clean, ≤ 4% moisture
Primer coverage	Visual	Continuous, no puddles or dry spots
TPS Fibermesh Tape Adhesion	Manual check	Fully adhered, no lifting
Mix ratio	Measurement	25 kg : 5.5–6.5 L water
Levelness	2 m straightedge	≤ 3 mm deviation
Surface finish	Visual	Smooth, pinhole-free, flat surface
Setting & curing	Observation	6 hrs walkable, 24 hrs full cure
Tape displacement	Visual post-rolling	None observed

## **11.0 SAFETY PRECAUTIONS**

11.1 Wear PPE including gloves, goggles, and safety boots.

11.2 Avoid inhalation of dust during mixing; use a respirator if required.

11.3 Wash skin immediately if contact occurs.

11.4 Do not discharge wash water or waste into drains.

11.5 Ensure proper housekeeping and spill control in the mixing area.



## **12.0 TECHNICAL DATA SUMMARY**

Appearance: Grey powder

Mix ratio: 25 kg : 5.5–6.5 L water

Recommended thickness: 3–6 mm

Working time: ~20 minutes

Walkable time: ~6 hours

Full cure: 24 hours

Compressive strength:  $\geq 20$  MPa (28 days)

Flexural strength:  $\geq 4$  MPa (28 days)

Bond strength:  $\geq 1.0$  N/mm<sup>2</sup>

Density: ~1.9 g/cm<sup>3</sup>

pH (wet mix): 11–13

Shelf life: 4 months from production date (sealed, dry storage)



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### 13. DISCLAIMER

The information provided herein is based on our best knowledge and is intended as a general guide for the proper use of TPS Self-Leveling Floor Underlayment. Conditions of use are beyond the manufacturer's control, and no warranty is expressed or implied. It is the responsibility of the applicator/contractor to determine the suitability of the product for the intended application.

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