



Model Specification for Installation of Tekcem RapidoWITT Screed Bonded to Concrete Using Tekcem SF Membrane

1. Substrate Requirements

Substrate Type:

Concrete slab.

Minimum Compressive Strength:

25 MPa.

Condition:

- Must be sound, dry, and free from standing water.
 - Remove all dust, laitance, oil, grease, curing agents, and surface contaminants.
 - Surface must be reasonably level and true, without sharp level changes that may induce cracking.
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2. Mechanical Surface Preparation

- Mechanically prepare the concrete using vacuum grit blasting or similar to expose a clean, open-textured surface.
- Remove all contaminants and surface fines.

Moisture Testing:

- Perform RH testing to BS 8203.
 - For a single-coat SF Membrane, the surface RH must be $\leq 85\%$.
 - If RH is $>85\%$ and $\leq 97\%$, use a two-coat SF Membrane system as per Tekcem's DPM guidance.
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3. Application of Tekcem SF Membrane (Single-Coat Bonding System)

Mixing:

Thoroughly mix Tekcem SF Membrane base resin and curing agent for at least 2 minutes until uniform in colour and consistency.

Application:

- Apply evenly by brush, roller, or squeegee.
- Coverage rate: approx. 3 m²/kg.



- Ensure continuous coverage with no dry patches or puddles.

Timing:

- Apply Tekcem RapidoWITT screed while the membrane is still wet (within 30 minutes).
 - Do not allow traffic over uncured SF Membrane.
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4. Tekcem RapidoWITT Screed Specification**Typical Mix Design (per m³):**

- 265 kg Tekcem RapidoWITT
- 1850 kg 0–4 mm screeding sand (BS EN 13139)
- 900 g PP fibres
- Approx. 85 litres of water (adjust for sand moisture content)

Properties:

- Semi-dry consistency – mix should form a firm ball with no free water bleed
- Working life: ~45–60 minutes
- Trafficable after ~12 hours
- Strength classification: $\geq$ CT-C35-F5
- Floor finishes may be applied once residual moisture is ≤ 2 CM% (usually from 10 days)

Thickness:

- Minimum bonded screed thickness: 20 mm (down to 15 mm with suitable epoxy bonding system)
 - Maximum single layer: 75 mm. For deeper sections, layer in two builds, keyed and compacted individually.
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5. Screed Application**Method:**

- Spread screed directly onto the wet Tekcem SF Membrane.
- Tamp, float, and trowel to achieve full compaction and desired surface finish.

Compaction:

Ensure thorough, void-free consolidation to achieve full bonding and performance.

Environmental Conditions:



- Substrate temperature: 5°C to 30°C
 - Ambient RH: <75%
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6. Post-Installation

Protection:

Protect screed from direct sunlight, strong airflow, frost, or rapid drying for the first 24 hours.

Access:

- Light foot traffic: 12–24 hours
- Site loading: ~72 hours
- Screed should not be force dried. Allow natural drying under ambient conditions.

Floor Finishes:

Check screed moisture content before installing any finishes. Target ≤ 2 CM% or $\leq 75\%$ RH depending on finish requirements.

7. Limitations

- Use single-coat SF Membrane only where RH $\leq 85\%$.
 - For RH between 85% and 97%, use two-coat SF Membrane system.
 - Screed must be placed while membrane remains wet.
 - Do not apply SF Membrane or screed if substrate or ambient temperatures are below 5°C or may drop below that during curing.
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8. Disclaimer

The guidance herein is based on Tekcem's experience and technical data. It is intended to assist in best practice installation but does not replace appropriate design judgement, testing, and validation. Tekcem Ltd accepts no liability for failure resulting from deviations or unsuitable conditions.

Installers are responsible for ensuring the suitability of Tekcem products for each specific project through adequate site assessment and quality control.