



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

1. Substrate Requirements

Substrate Type:

Concrete slab.

Minimum Compressive Strength:

25 MPa.

Condition:

- Sound, clean, and dry with no standing water.
 - Free from laitance, dust, oil, grease, curing compounds, and other contaminants.
 - Reasonably flat and true — any sudden level changes must be corrected prior to installation.
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2. Mechanical Surface Preparation

Method:

Prepare the concrete using vacuum-assisted shot blasting, grinding, or similar to remove all laitance and contamination and provide a mechanically keyed, open-textured surface.

Moisture Testing:

Test the surface in accordance with BS 8203.

- For single-coat bonding: surface RH must be $\leq 85\%$.
 - If RH is between 85–97%, use a two-coat SF Membrane system — refer to Tekcem SF Membrane data sheet.
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3. Application of Tekcem SF Membrane (Single-Coat Bonding System)

Mixing:

Thoroughly mix Tekcem SF Membrane base resin with curing agent for a minimum of 2 minutes until fully blended and uniform in colour.

Application:

Apply one even coat of SF Membrane using a roller, brush, or squeegee at a coverage rate of approx. 3 m²/kg.

Ensure complete coverage with no bare patches or ponding.

**Timing:**

Screed must be placed wet-on-wet onto the uncured SF Membrane within 30 minutes of application.

Foot Traffic:

Do not walk on the wet membrane surface. Any contamination must be removed and fresh membrane reapplied.

4. Tekcem Tekscreed Screed Specification

Mix Design (per m³):

- 400 kg OPC (CEM I, 42.5N)
- 1600 kg 0–4 mm screeding sand (to BS EN 13139, fines category 1)
- Tekcem Tekscreed admixture: dosage per Tekcem Tekscreed TDS
- Water: Add gradually to achieve semi-dry, ballable consistency (typically 50–60 L)
- Optional: 1 kg polypropylene fibres for additional crack control

Consistency:

Semi-dry — the mix should form a firm ball when squeezed by hand without releasing water.

Working Life:

45–60 minutes from mixing.

Thickness (Bonded Screed Applications):

- **Standard bonded screed:** 25 mm
- **Minimum 15 mm:** only when bonded using epoxy — see Tekcem SF Membrane data sheet
- **Maximum layer thickness:** 75 mm

For thicker build-ups, apply in layers. Scratch-key intermediate layers and apply subsequent lifts within 45 minutes.

5. Screed Application

Method:

Place the Tekscreed screed directly into the wet SF Membrane bonding coat. Spread, tamp, float and trowel as required to achieve full compaction and finish.

Compaction:

Ensure the screed is compacted fully throughout its depth with no voids, particularly at edges, junctions, and around penetrations.



Environmental Conditions:

- Substrate temperature: 5–30°C
 - Ambient relative humidity: <75%
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6. Post-Installation

Protection:

Protect freshly laid screed from drying too quickly. Avoid exposure to direct sunlight, strong airflow, frost, and moisture ingress for at least the first 24–72 hours.

Access:

- Light foot traffic: after 24 hours
- Full site traffic: after 7 days (dependent on thickness and ambient conditions)

Floor Finishes:

Confirm screed is fully cured and residual moisture content is $\leq 75\%$ RH before applying any floor finishes.

7. Limitations

- Tekcem Tekscreed must be applied wet-on-wet onto the SF Membrane.
 - A single-coat SF Membrane system is suitable only where RH is $\leq 85\%$.
 - If RH is between 85–97%, a two-coat DPM system must be used.
 - Do not apply if substrate or ambient temperatures are below 5°C or may fall during curing.
 - Screeds must not exceed 75 mm per layer — deeper sections must be built up in layers.
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8. Disclaimer

This specification is based on Tekcem's expertise and current product knowledge. It is intended as a guide for best practice but does not replace appropriate professional advice, detailed design, or site-specific assessment. Tekcem Ltd accepts no liability for misuse or deviation from the guidance provided.

Installers must ensure that the specification is suitable for their particular application and that appropriate quality control and testing is conducted throughout the process.

Tekcem Tekscreed_bonded_SF membrane_1coat_no UFH_May2025_R1