



# Model Specification for Installation of Tekcem Tekscreeed Screed onto Beam and Block Floor Using Tekcem SF Membrane (Two-Coat System)

---

## 1. Substrate Requirements

### Substrate Type:

Precast beam and block floor system.

### Minimum Compressive Strength:

25 MPa for both beams and blocks.

### Condition:

- Surface must be structurally sound, solid, and continuous.
  - All voids, joints, gaps, or holes must be fully grouted and made flush.
  - Free from dust, laitance, oil, grease, curing agents, or other contaminants.
  - Reasonably flat and true — avoid sudden changes in level.
- 

## 2. Mechanical Surface Preparation

Mechanically abrade the surface using vacuum grit blasting or suitable mechanical preparation.

Remove all laitance, dust, oil, grease, curing agents, and contaminants.

Ensure a clean, absorbent, open-textured surface to promote adhesion.

### Moisture Testing:

Test in accordance with BS 8203. The Tekcem SF Membrane two-coat system accommodates surface RH up to 97%.

---

## 3. Application of Tekcem SF Membrane (Two-Coat System)

### Mixing:

Thoroughly mix the curing agent into the base resin for at least 2 minutes until fully uniform.

### First Coat:

Apply evenly by roller, brush, or squeegee at ~3 m<sup>2</sup>/kg.

Allow to cure fully (typically overnight at 20°C).

Ensure the surface is clean and dry before proceeding.

**Second Coat:**

Apply evenly at ~4 m<sup>2</sup>/kg.

Install the screed wet-on-wet while the second coat remains wet (within 30 minutes of application).

**Traffic Control:**

No trafficking is allowed on the wet second coat. Reapply if contaminated.

---

#### 4. Tekcem Tekscreed Screed Specification

**Mix Design (per m<sup>3</sup>):**

- 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: Adjust to achieve semi-dry consistency (typically 50–60 L)
- Optional: 1 kg polypropylene fibres

**Consistency:**

Semi-dry — should form a firm ball when squeezed without bleeding water.

**Working Life:**

45–60 minutes from mixing.

**Thickness (Bonded Applications):**

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

For greater depths, apply in layers with scratch-keying between. Each layer should be applied within 45 minutes of the previous.

---

#### 5. Screed Application

**Method:**

Spread Tekcem Tekscreed directly onto the wet second coat of SF Membrane.

Tamp, float, and steel trowel to finish and consolidate the surface.

**Compaction:**

Ensure full compaction throughout the depth to eliminate voids and maximise bond strength.



### Environmental Conditions:

- Substrate temperature: 5°C to 30°C
  - Ambient relative humidity: below 75% RH
- 

## 6. Post-Installation

### Protection:

Protect screed from direct sun, frost, draughts, and rapid drying for at least the first 24–72 hours.

### Access:

- Light foot traffic: 24 hours
- Full site traffic: ~7 days depending on conditions

### Floor Finishes:

Ensure the screed is dry to  $\leq 75\%$  RH before applying floor finishes.

---

## 7. Limitations

- Tekcem SF Membrane must be used as a two-coat system on beam and block floors.
  - Screed must be placed wet-on-wet into the second coat.
  - Grout all joints and voids in the substrate prior to membrane application.
  - Do not install SF Membrane or screed below 5°C or in falling temperatures.
- 

## 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 Tekscreeed\_bonded\_SF membrane\_2 coat\_Beam and Block \_no UFH\_May2025\_R1