



Model Specification for Installation of Tekcem 025 Industrial Screed onto Concrete Substrate Using Two Coats of Tekcem SF Membrane (Red/Black) with Quartz Scatter and Finished with Tekcem Matt Seal (Bonded System)

1. Substrate Requirements

Substrate Type:

Concrete slab suitable for bonded screed systems.

Minimum Compressive Strength:

25 MPa.

Condition:

- Structurally sound and crack-free.
 - Surface must be clean, dry, and free from laitance, oil, grease, dust, curing agents, and other contaminants.
 - Flat and level – significant deviations should be corrected.
 - Surface relative humidity (RH) may be up to **97%** due to use of SF Membrane as a surface-applied DPM.
-

2. Mechanical Surface Preparation

Method:

Prepare by vacuum-assisted shot blasting or mechanical grinding to create a clean, open-textured surface.

Cleaning:

Thoroughly vacuum the surface to remove all loose debris and dust.

Moisture Testing:

Test substrate RH in accordance with **BS 8203**. Tekcem SF Membrane can be used where RH $\leq$ 97%.

3. Damp Proof Membrane & Bonding System – Two Coats of Tekcem SF Membrane with Quartz Scatter

Product:

Tekcem SF Membrane – solvent-free, two-part epoxy DPM



- **First Coat:** Red
- **Second Coat:** Black

Quartz Scatter:

Tekcem Quartz (0.7–1.2 mm), broadcast full blind into second coat at ~2 kg/m².

First Coat (Red):

- **Mixing:** Mechanically mix the resin and curing agent for at least 2 minutes.
- **Application:** Apply at ~3 m²/kg using roller or squeegee.
- **Curing:** Allow to become tack-free (~6 hours at 20°C).

Second Coat (Black):

- **Application:** Apply at ~3 m²/kg.
- **While Wet:** Broadcast Tekcem Quartz to full blind coverage at ~2 kg/m².
- **Curing:** Allow a minimum of 14 hours at 20°C.
- **Finish:** Once cured, remove all loose quartz by sweeping and vacuuming.

This two-coat system serves as both a **damp proof membrane** and a **bonding agent**.

4. Tekcem 025 Industrial Screed Specification

Product:

Tekcem 025 Industrial – high-performance, shrinkage-compensated, single-part industrial screed.

Water Addition:

5.5 litres per 25 kg unit (maximum 6 litres).

Performance:

- Working time: 20–30 minutes
- Light foot traffic: ~3 hours
- Light forklift traffic: ~24 hours
- Full traffic: ~7 days
- Compressive strength:
 - 15 MPa (1 day)
 - 25 MPa (7 days)
 - 30 MPa (28 days)
- Flexural strength:
 - 4 MPa (1 day)
 - 6 MPa (7 days)
 - 7 MPa (28 days)

**Thickness:**

3–25 mm in a single bonded application.

5. Screed Application

Mixing:

Add powder slowly to water and mix using a slow-speed drill or screed pump until a smooth, cohesive mix is achieved. Allow to stand for 2 minutes, remix, and apply within 30 minutes.

Placement:

Place the screed directly onto the **fully cured, quartz-scattered Tekcem SF Membrane**. Spread and level using a steel trowel. Finish with a spiked roller to release air.

Environmental Conditions:

Substrate temperature: 5–30°C

Ambient RH: <75%

6. Surface Sealing – Tekcem Matt Seal

Product:

Tekcem Matt Seal – two-pack, water-dispersed epoxy resin sealer providing a **clear, matte finish**.

Preparation:

Ensure Tekcem 025 Industrial screed is **completely dry** before application of seal. Trapped moisture may result in discolouration or surface defects.

Mixing:

Pour resin into curing agent and mix thoroughly for a minimum of 2 minutes using a slow-speed mechanical stirrer.

Application:

- Apply first coat at 4–5 m²/kg using roller, brush or squeegee.
- Avoid pooling and ensure even distribution.
- Allow to dry for **minimum 16 hours** at 20°C.
- If required, apply second coat within 48 hours.

Curing:

- Touch dry: ~16 hours
- Full cure: 7 days
- Protect from water contact for at least 24 hours post-application



Properties:

- Hygienic and easy to clean
 - Resistant to chemicals, oils, and abrasion
 - UV stable, solvent-free, low odour
 - Provides a **durable matte finish**
-

7. Post-Installation Guidance

Drying Time (Screed):

Allow **1 day per 10 mm** in good drying conditions. Low temperatures or high humidity will extend drying.

RH Testing:

RH testing in accordance with **BS 8203** should confirm the screed is suitably dry before applying the sealer.

Access:

- Light foot traffic: ~3 hours (screed)
- Full traffic: ~7 days (screed)
- Do not expose Matt Seal to wear, water, or cleaning chemicals until **fully cured (7 days)**

8. Disclaimer

The information provided in this specification is based on Tekcem's experience and current knowledge and is given in good faith to assist in specifying the installation of Tekcem products. It does not replace the need for appropriate design, professional judgement, and proper site evaluation. Tekcem Ltd accepts no liability for the improper use of its products or deviation from the recommended guidelines.

Site conditions, working methods, substrate types, and application techniques can all vary significantly and are beyond Tekcem's control. Therefore, it is the responsibility of the contractor and/or installer to ensure that the products are suitable for the specific conditions of each individual project.

This specification does not relieve the user of the responsibility to carry out appropriate checks, tests, and quality assurance procedures prior to and during application.

Doc Ref - Tekcem 025_SF Membrane 2 coat_concrete_Matt seal_May 2025 _R1