



Model Specification for Installation of Tekcem 025+ Industrial Screed onto Concrete Substrate Using One Coat of Tekcem SF Membrane 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, crack-free, and continuous.
 - Clean, dry and free from laitance, dust, grease, oil, curing compounds, and other contaminants.
 - Surface relative humidity must be $\leq 75\%$ RH. If RH exceeds this, a separate DPM is required.
 - Flat and level; significant deviations should be corrected prior to screed application.
-

2. Mechanical Surface Preparation

Method:

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

Cleaning:

Thorough vacuuming to remove all loose particles and dust.

Moisture Testing:

Conduct moisture testing in accordance with BS 8203. If RH exceeds 75%, install a separate surface DPM prior to bonding agent.

3. Bonding Agent – Tekcem SF Membrane (1 Coat) with Quartz Scatter

Product:

Tekcem SF Membrane (solvent-free epoxy resin), red or black colour.

**Aggregate:**

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

Mixing:

Add full contents of the curing agent into the resin base and mix using a slow-speed mechanical mixer for at least 2 minutes until uniform.

Application:

- Apply one coat at 3 m²/kg with roller or squeegee.
- Immediately broadcast quartz aggregate while wet to achieve full blind coverage (~2 kg/m²).
- Allow to fully cure (min. 14 hours at 20°C).
- Sweep and vacuum to remove all excess loose quartz.

Note: Single-coat Tekcem SF Membrane with quartz scatter acts as a **bonding agent**, not a DPM.

4. Tekcem 025+ Industrial Screed Specification

Product:

Tekcem 025+ Industrial – high-strength, pumpable, shrinkage-compensated cementitious screed.

Water Addition:

5.5 litres per 25kg bag (maximum 6 litres). Exceeding this limit will reduce strength and extend drying.

Performance:

- Working time: 20–30 minutes at 20°C
- 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 Guidelines (Bonded):**

3 mm to 25 mm in a single layer.

5. Screed Application**Mixing:**

Add powder to water gradually while mixing. Use a slow-speed drill or suitable pump. Mix until smooth. Allow to stand for 2 minutes, remix, and use within 30 minutes.

Placement:

Pour or pump directly onto the fully cured quartz-scattered SF Membrane. Trowel to level and finish with a spiked roller to remove air.

Conditions:

Substrate temperature: 5–30°C

Ambient RH: <75%

6. Protective Sealer – Tekcem Matt Seal**Product:**

Tekcem Matt Seal – two-part water-dispersed epoxy sealer.

Preparation:

Ensure the Tekcem 025 +Industrial screed is **fully dry** before applying Matt Seal. Premature application may cause staining or adhesion failure.

Mixing:

Pour resin into curing agent and mix mechanically for at least 2 minutes until homogeneous.

Application:

- Apply first coat by roller, squeegee, or brush at 4–5 m²/kg.
- Avoid pooling and ensure full coverage.
- Allow to dry (min. 16 hours at 20°C).
- Apply a second coat if required within 48 hours.

Curing:

- Touch dry: ~16 hours
- Full cure: 7 days
- Avoid water contact during the first 24 hours



Properties:

- Clear, matte finish
 - Hygienic, low odour, solvent-free
 - Abrasion and chemical resistant
 - Can be applied to dry or damp screed surfaces
-

7. Post-Installation Guidance

Drying Time (Screed):

For thicknesses >10 mm, allow approx. **1 day per 10 mm** in good drying conditions. Cold or humid conditions will increase drying times.

RH Testing:

Carry out RH testing in accordance with BS 8203 before applying floor finishes or resin sealers.

Access:

- Light foot traffic: after 3 hours (screed)
- Full traffic: after 7 days (screed)
- Do not expose Matt Seal to heavy wear 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 1 coat_concrete_Matte seal_May 2025 _R1