



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 Gloss 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 stable.
 - Surface must be clean, dry, and free from laitance, oil, dust, grease, and curing compounds.
 - Flat and level – deviations corrected prior to application.
 - Surface relative humidity (RH) must be $\leq 75\%$. If RH exceeds this value, a separate DPM must be applied prior to bonding.
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2. Mechanical Surface Preparation

Method:

Mechanically prepare using vacuum-assisted shot blasting or diamond grinding to expose a clean, textured substrate.

Cleaning:

Vacuum to remove all residual dust and contaminants.

Moisture Testing:

Test RH in accordance with BS 8203. If above 75%, install a suitable damp proof membrane before continuing.

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

Product:

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

**Quartz:**

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

Mixing:

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

Application:

- Apply **one coat** at approx. 3 m²/kg using a squeegee or roller.
- While still **wet**, immediately **broadcast 0.7–1.2 mm quartz** at ~2 kg/m² to achieve full blind coverage.
- Allow to cure fully (minimum 14 hours at 20°C).
- Remove all loose quartz by sweeping and vacuuming.

Note: In this context, Tekcem SF Membrane is used as a **bonding agent**, not a DPM.

4. Tekcem 025 + Industrial Screed Specification

Product:

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

Water Addition:

5.5 litres per 25kg unit (max. 6 litres). Do not exceed.

Performance Characteristics:

- Working time: 20–30 minutes at 20°C
- Light foot traffic: ~3 hours
- Light forklift traffic: ~24 hours
- Full service 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 mm to 25 mm in a single bonded application.



5. Screed Application

Mixing:

Add powder slowly to water and mix using a low-speed drill or screed pump. Mix to a smooth, fluid consistency. Allow to stand 2 minutes, remix, and use within 30 minutes.

Placement:

Apply screed directly over the **fully cured and quartz-scattered SF Membrane**. Spread with a steel trowel and finish using a spiked roller.

Environmental Conditions:

Substrate temperature: 5–30°C

Ambient RH: <75%

6. Sealer Application – Tekcem Gloss Seal

Product:

Tekcem Gloss Seal – two-part, water-dispersed epoxy resin with a clear, high-gloss finish.

Surface Preparation:

Ensure Tekcem 025 +Industrial is fully dry before applying sealer. Moisture in the screed can cause surface defects or poor adhesion.

Mixing:

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

Application:

- Apply first coat at 4–5 m²/kg by roller, brush, or squeegee.
- Ensure even coverage and avoid pooling.
- Allow to dry for minimum 16 hours at 20°C.
- Apply a second coat within 48 hours if needed.

Curing:

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

Properties:

- Clear, high-gloss finish
- Excellent abrasion and chemical resistance
- UV stable, solvent-free
- Hygienic and easy to clean



7. Post-Installation Guidance

Drying Guidance (Screed):

Allow **1 day per 10 mm** of thickness under ideal drying conditions. Drying times will be extended in low temperatures or high humidity.

RH Testing:

Always perform RH testing in accordance with BS 8203 before applying resin finishes or floor coverings.

Access:

- Light foot traffic: after 3 hours (screed)
- Full site traffic: after 7 days (screed)
- Gloss Seal should not be subjected to wear or chemical exposure 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.

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