



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 Gloss 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.
 - Free from laitance, dust, oil, grease, curing compounds, and contaminants.
 - Flat and level; any significant deviations must be corrected prior to screed installation.
 - Surface relative humidity (RH) may be up to **97%** due to use of SF Membrane as a **surface DPM**.
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2. Mechanical Surface Preparation

Method:

Mechanically abrade using vacuum-assisted shot blasting or diamond grinding to expose clean, textured concrete.

Cleaning:

Thoroughly vacuum the surface to remove dust and debris.

Moisture Testing:

Test in accordance with **BS 8203**. If RH exceeds 97%, substrate must be allowed to dry further before proceeding.



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

Product:

Tekcem SF Membrane – solvent-free two-part epoxy, applied in **two coats**:

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

Quartz Scatter:

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

First Coat (Red):

- **Mixing:** Add curing agent to resin base and mix mechanically for 2 minutes.
- **Application:** Apply at 3 m²/kg by roller or squeegee.
- **Drying:** Allow to become tack-free (~6 hours at 20°C).

Second Coat (Black):

- **Application:** Apply second coat at 3 m²/kg.
- **Quartz Broadcast:** While the resin is still wet, immediately broadcast Tekcem Quartz at ~2 kg/m² to fully blind the surface.
- **Curing:** Allow a minimum of 14 hours curing at 20°C.
- **Finishing:** Once cured, sweep and vacuum to remove all loose aggregate.

This two-layer system acts as both a **surface DPM** and **bonding agent**.

4. Tekcem 025 Industrial Screed Specification

Product:

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

Water Addition:

5.5 litres per 25kg unit (max. 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 mm to 25 mm in a single bonded application.

5. Screed Application

Mixing:

Add powder slowly to measured water and mix using a slow-speed drill or screed pump. Let stand for 2 minutes, remix, and use within 30 minutes.

Placement:

Apply directly onto the **fully cured, quartz-scattered black SF Membrane**. Spread to level using a trowel and finish with a spiked roller.

Environmental Conditions:

- Substrate temperature: 5–30°C
 - Ambient RH: <75%
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6. Surface Sealer – Tekcem Gloss Seal

Product:

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

Surface Preparation:

Ensure Tekcem 025 Industrial is **fully dry** before sealing to avoid blistering or loss of adhesion.

Mixing:

Pour resin into hardener and mix thoroughly using a mechanical stirrer for at least 2 minutes.

Application:

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



Curing:

- Touch dry: ~16 hours
- Full cure: 7 days
- Avoid water contact for 24 hours after application

Benefits:

- High-gloss clear finish
 - Chemical and abrasion resistant
 - UV stable, low odour, solvent-free
 - Hygienic and easy to maintain
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7. Post-Installation Guidance

Drying Time (Screed):

For thicknesses >10 mm, allow approx. **1 day per 10 mm**. Drying time will increase in low temperature or high humidity.

RH Testing:

RH testing (in line with BS 8203) must confirm acceptable levels before applying sealer or other finishes.

Access:

- Light foot traffic: ~3 hours (screed)
- Full site traffic: ~7 days
- Gloss Seal should not be subjected to 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.

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