



# Model Specification for Installation of Tekcem 025 Industrial Screed onto Concrete Substrate Using Two Coats of Tekcem SF Membrane (Red/Black) with Quartz Scatter (Bonded System – No Sealer)

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## 1. Substrate Requirements

### Substrate Type:

Concrete slab suitable for bonded screed systems.

### Minimum Compressive Strength:

25 MPa.

### Condition:

- Structurally sound and crack-free.
  - Clean, dry, and free from laitance, dust, oil, grease, curing compounds, and other surface contaminants.
  - Flat and level.
  - Surface RH up to **97%** is acceptable due to the application of Tekcem SF Membrane as a **damp proof membrane**.
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## 2. Mechanical Surface Preparation

### Method:

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

### Cleaning:

Remove all dust and debris with industrial vacuuming.

### Moisture Testing:

Test RH in accordance with **BS 8203**. Tekcem SF Membrane is suitable for substrates up to **97% RH**. Higher values require further drying.

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

**Product:**

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

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

**Quartz:**

Tekcem Quartz (0.7–1.2 mm) broadcast into the second coat at ~2 kg/m<sup>2</sup> (full blind).

**First Coat (Red):**

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

**Second Coat (Black):**

- **Application:** Apply at ~3 m<sup>2</sup>/kg.
- **Quartz Scatter:** While still wet, broadcast quartz at ~2 kg/m<sup>2</sup> to achieve full blind coverage.
- **Curing:** Allow a minimum of 14 hours at 20°C.
- **Finishing:** Once cured, sweep and vacuum to remove all loose quartz.

This two-coat system acts as a **surface-applied damp proof membrane and bonding agent** for the screed.

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### 4. Tekcem 025 Industrial Screed Specification

**Product:**

Tekcem 025 Industrial – high-strength, single-part, shrinkage-compensated 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)

**Application Thickness:**

3 mm to 25 mm in a single bonded application.

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## 5. Screed Application

**Mixing:**

Add powder to water and mix with a low-speed drill or pump mixer until uniform. Let stand for 2 minutes, remix, and apply within 30 minutes.

**Placement:**

Place screed directly onto the **fully cured, quartz-scattered black SF Membrane**. Spread with a steel trowel and finish with a spiked roller to remove air.

**Environmental Conditions:**

- Substrate temperature: 5–30°C
  - Ambient relative humidity: <75%
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## 6. Post-Installation Guidance

**Drying Guidance (Screed):**

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

**RH Testing:**

Before applying any floor finishes, test residual moisture in accordance with **BS 8203** to confirm suitability.

**Access:**

- Light foot traffic: ~3 hours
- Full traffic: ~7 days



### **Floor Finishes:**

Ensure RH is  $\leq 75\%$  or within manufacturer's tolerance prior to applying any coverings. If left exposed, no further coating or sealing is applied as part of this system.

### **7. 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\_ no seal\_May 2025 \_R1