# Model Specification for Installation of Tekcem 025 Industrial Screed onto Concrete Substrate Using One Coat of Tekcem SF Membrane with Full Quartz Scatter (Bonded System)

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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 free from movement or contamination.
- All cracks and surface defects repaired to produce a flush, stable surface.
- Free from laitance, dust, oil, grease, curing compounds, and other contaminants.
- Flat and level. Any significant deviations should be corrected prior to screed application.
- If applied as a bonding agent (single coat), the substrate must be ≤75% RH, or a separate DPM should be used.

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**2. Mechanical Surface Preparation**

**Method:**
Vacuum-assisted shot blasting or diamond grinding to remove surface contamination and provide a mechanical key.

**Cleaning:**
Thoroughly vacuum the prepared surface to remove all dust and debris.

**Moisture Testing:**
Carry out RH testing in accordance with BS 8203. If surface RH exceeds 75%, a suitable damp proof membrane must be applied before proceeding.

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

**Product:**
Tekcem SF Membrane (solvent-free epoxy resin), applied as a **single coat bonding agent** in either **red or black**.

**Aggregate:**
0.7–1.2 mm Tekcem Quartz applied full blind.

**Mixing:**
Pour the entire contents of the curing agent into the resin base. Mix thoroughly using a slow-speed mechanical paddle for at least 2 minutes until fully blended and uniform in colour.

**Application:**

- Apply one coat at a nominal coverage rate of 3 m²/kg using a roller or squeegee.
- While still wet, **broadcast 0.7–1.2 mm quartz aggregate** at approximately **2 kg/m²**, achieving full coverage.
- Allow to fully cure (minimum 14 hours at 20°C).
- Once cured, remove all loose quartz by sweeping and vacuuming.

**Note:** A single coat of Tekcem SF Membrane with full quartz scatter is classed as a *bonding agent*, not a damp proof membrane.

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**4. Tekcem 025 Industrial Screed Specification**

**Product:**
Tekcem 025 Industrial – high strength, shrinkage-compensated, cementitious floor topping.

**Water Addition:**
5.5 litres per 25kg unit (maximum 6 litres). Exceeding this may reduce performance.

**Performance Characteristics:**

- 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:**
3–25 mm in a single bonded application.

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## 5. Screed Application

**Mixing:**
Add powder to measured water slowly while mixing with a low-speed drill and paddle. Mix thoroughly to a smooth, lump-free consistency. Allow to stand for 2 minutes, remix, and use within 30 minutes.

**Placement:**
Pour or pump screed directly onto the **fully cured, quartz-scattered Tekcem SF Membrane**. Trowel to desired thickness and finish with a spiked roller to eliminate air.

**Conditions:**
Substrate temperature: 5–30°C
Ambient RH: <75%

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## 6. Post-Installation Guidance

**Drying Times:**
For applications thicker than 10 mm, allow approximately **1 day per 10 mm** under ideal drying conditions.
Drying times will be extended in cold or humid environments.

**RH Testing:**
Always perform RH testing in accordance with BS 8203 before installing floor finishes.

**Access:**

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

**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.

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