



Model Specification for Installation of Tekcem 212+ Leveller onto Concrete Substrate Using One Coat of Tekcem SF Membrane with Tekcem Quartz Scatter (Bonded System)

1. Substrate Requirements

Substrate Type:

Concrete slab suitable for bonded self-levelling systems.

Minimum Compressive Strength:

25 MPa.

Condition:

- Structurally sound, stable, and free from movement.
 - Free of dust, oil, grease, laitance, curing agents, or other contaminants.
 - Dry at the surface with a measured **RH < 85 %** (BS 8203).
 - Flat and level; major deviations corrected before application.
 - No standing or trapped water.
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2. Mechanical Surface Preparation

Method:

Mechanically abrade the concrete using vacuum-assisted shot-blasting, diamond grinding, or similar to expose a clean, textured surface suitable for bonding.

Cleaning:

Remove all debris and dust using an industrial vacuum system.

Moisture Testing:

Carry out RH testing in accordance with BS 8203. Tekcem SF Membrane is suitable for substrates up to **85 % RH** in this specification.

3. Primer Application (Tekcem SF Membrane + Quartz Scatter)

Primer:

Tekcem SF Membrane – two-component, solvent-free epoxy surface membrane providing moisture control and excellent adhesion between concrete and cementitious toppings.

Preparation:

- Mix both components thoroughly using a slow-speed drill and paddle until a uniform



colour is achieved.

- Ensure substrate temperature is between 10 °C and 25 °C.

Application (one-coat system):

- Apply **one uniform coat** of Tekcem SF Membrane by roller or brush at a nominal coverage of **3 m²/kg**.
- While the coating remains **wet**, broadcast **0.7 – 1.2 mm Tekcem Quartz** evenly across the entire surface at a rate of approximately 2 kg/m² to achieve full coverage (“full blind”).
- Allow the membrane to **fully cure (typically 12–14 hours @ 20 °C)**.
- Once cured, remove excess loose aggregate by sweeping and vacuuming prior to levelling compound application.

Conditions:

Apply only to clean, dry concrete. Ambient and substrate temperature 5–30 °C; RH < 75 %. Avoid condensation during curing.

4. Tekcem 212+ Leveller Specification

Product:

Tekcem 212+ Leveller Plus – fast-setting, cement-based, shrinkage-compensated self-levelling compound.

Water Addition:

5.8 – 6.0 litres per 25 kg unit. Do not exceed 6 litres to avoid strength loss.

Properties:

- Working time: 20–30 minutes @ 20 °C
- Light foot traffic: ~2 hours @ 20 °C
- Tile installation: after 3 hours @ 3 mm
- Resilient finishes: after 4 hours @ 3 mm
- Compressive strength (28 days): > 22 N/mm²
- Flexural strength (28 days): > 5 N/mm²

Thickness Guidelines (Bonded Systems):

Minimum 2 mm, maximum 12 mm in a single application. For thicker sections, apply in multiple layers, re-priming with Tekcem SF Membrane as required.

5. Screed Application

Mixing:

Add powder slowly to clean water while mixing with a slow-speed drill and paddle or pump. Mix until uniform and lump-free. Allow to stand 2 minutes, then re-mix and apply immediately. Use within 30 minutes of mixing.

**Placement:**

Pour or pump onto the prepared and quartz-seeded substrate. Spread using a steel trowel and finish with a spiked roller to release air.

Environmental Conditions:

Substrate temperature 5–30 °C; ambient RH < 75 %.

6. Post-Installation

Drying & Overlay:

- Light foot traffic: ~2 hours @ 20 °C
- Tiled finishes: after 3 hours @ 3 mm
- Resilient finishes: after 4 hours @ 3 mm
- Ensure residual moisture is within acceptable limits before final flooring.

Drying Guidance:

Typical 3–4 hours @ 3 mm under normal conditions. Cool or humid environments will extend drying. Always confirm RH before installing sensitive finishes.

Curing:

No curing membrane required; avoid rapid drying from heat or airflow.

Access:

Light traffic after 2–3 hours; full traffic after 24 hours.

7. Limitations

- Do not apply below 5 °C or above 30 °C.
- Not suitable for areas subject to permanent water immersion.
- Ensure substrate RH < 85 % before application.
- Only use Tekcem SF Membrane and Tekcem Quartz Scatter as specified for high-bond systems.
- Follow all mixing and curing instructions to avoid delamination or adhesion failure

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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