



Model Specification for Installation of Tekcem 220+ Leveller onto Concrete Substrate Using Two Coats of Tekprime (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 or cracking.
 - All cracks and defects repaired to form a flush, stable surface.
 - Free from laitance, dust, oil, grease, curing agents, and contaminants.
 - Surface relative humidity $\leq 75\%$ (BS 8203).
 - Flat and true; major deviations corrected before application.
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2. Mechanical Surface Preparation

Method:

Mechanically abrade using vacuum-assisted shot-blasting, grinding, or equivalent to expose a clean, textured surface.

Cleaning:

Remove all dust and debris with industrial vacuum equipment.

Moisture Testing:

Confirm $RH \leq 75\%$. If higher, install a suitable surface DPM before priming.

3. Primer Application (Two Coats Tekprime)

Primer:

Tekcem Tekprime.

Dilution Ratio:

3 parts clean water : 1 part Tekprime (3 : 1).

Coat 1:

Apply the first diluted coat uniformly using a roller or soft broom.

Allow to fully dry and film-form (minimum 1 hour depending on conditions).

**Coat 2:**

Apply a second identical coat at the same dilution.
Ensure the surface is dry and tack-free before applying Tekcem 220+.

Coverage:

Approx. 170 m² per 5 L of Tekprime at 3 : 1 dilution (per coat, subject to substrate porosity).

Conditions:

Do not apply if substrate or ambient temperature is below 5 °C or above 30 °C.
Maintain ambient RH below 75 % during curing.

4. Tekcem 220+ Leveller Specification

Product:

Tekcem 220+ Leveller – rapid-setting, cement-based, protein-free, shrinkage-compensated smoothing compound.

Water Addition:

5.6 – 6.0 litres per 25 kg unit.
Do not exceed 6 litres to avoid strength loss or extended drying times.

Properties:

- Working time: 20 – 30 minutes @ 20 °C
- Light foot traffic: ~ 2 – 3 hours @ 20 °C
- Floor finishes: after 24 hours @ 3 mm
- Compressive strength: > 12 MPa (1 day), > 25 MPa (7 days), > 28 MPa (28 days)
- Flexural strength: > 4 MPa (1 day), > 6 MPa (7 days), > 7 MPa (28 days)

Thickness Guidelines (Bonded Systems):

Minimum 2 mm, maximum 20 mm in a single application.
For greater depths, apply in layers with re-priming between coats.

5. Screed Application

Mixing:

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

Placement:

Pour or pump the material onto the primed substrate.



Spread with a steel trowel to required thickness and finish using a spiked roller to release air.

Environmental Conditions:

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

6. Post-Installation

Drying & Overlay:

- Light foot traffic: after ~ 2 – 3 hours @ 20 °C
- Tiled finishes: after 3 hours @ 3 mm
- Other floor finishes: after 24 hours @ 3 mm
- Ensure residual moisture content is suitable before overlaying.

Drying Guidance:

Allow 1 day per 10 mm thickness in good conditions.

Low temperatures and high humidity extend drying. Verify RH before sensitive floor finishes.

Curing:

No curing membrane required. Avoid rapid drying from direct heat or strong 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 ≤ 75 % before application.
- Only use Tekcem Tekprime for bonded systems of this type

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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