Model Specification for Installation of Tekcem 212+ Leveller onto Concrete Substrate Using Two Coats of Tekprime (Bonded System)

1. Substrate Requirements

Substrate Type:
Concrete slab or sand/cement screed suitable for bonded self-levelling systems.

Minimum Compressive Strength:
25 MPa.

Condition:
- Structurally sound, stable, and free from movement.
- All cracks and surface defects to be repaired to achieve a flush, stable surface.
- Free from laitance, dust, oil, grease, curing agents, and contaminants.
- Dry, with surface relative humidity ≤ 75 % (BS 8203).
- Flat and level; significant deviations to be corrected before application.

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 using an industrial vacuum cleaner.

Moisture Testing:
Confirm surface RH ≤ 75 %. If above this level, install a suitable moisture-tolerant 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, soft broom, or squeegee.

Allow to fully dry and film-form before applying the second coat (minimum 1 hour between coats, depending on site conditions).

Coat 2:
Apply the second coat at the same dilution rate. Ensure the primer is fully dry before applying Tekcem 212+ Leveller Plus.

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

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

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4. Tekcem 212+ Leveller Specification

Product:
Tekcem 212+ Leveller – fast-setting, cement-based, protein-free, shrinkage-compensated self-levelling compound.

Water Addition:
5.8 – 6.0 litres per 25 kg unit.
Do not exceed 6 litres, as this can lead to extended drying times and strength reduction.

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 applications, apply in multiple layers, priming between coats.

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5. Screed Application

Mixing:
Add powder slowly to clean water while mixing using a slow-speed drill and paddle or suitable screed pump.
Mix until homogeneous and lump-free.

Allow to stand for 2 minutes, re-mix, and apply immediately.
Use each batch within 20–30 minutes of mixing.

Placement:
Pour or pump the material onto the primed substrate.
Spread using a steel trowel to the required thickness and finish with a spiked roller to remove trapped air.

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

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6. Post-Installation

Drying & Overlay:
- Light foot traffic: after ~2 hours @ 20 °C
- Tiled finishes: after 3 hours @ 3 mm
- Resilient finishes: after 4 hours @ 3 mm
- Ensure the screed is suitably dry for the intended floor finish.

Drying Guidance:
For 3 mm thickness, typical drying time is 3–4 hours under good ventilation.
Low temperatures and high humidity will extend drying.
Always test surface RH prior to installing sensitive floor finishes.

Curing:
No curing membrane is required, but avoid rapid drying from direct heat or draughts.

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

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7. Limitations

- Do not apply below 5 °C or above 30 °C.
- Not suitable for permanent water immersion.
- Ensure substrate moisture ≤ 75 % RH before application.
- Follow Tekcem priming and substrate guidelines for best bond performance.

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.

Doc Ref - Tekcem 212+_Tekprime 2 coat_concrete_May 2025 _R1