Model Specification for Installation of Tekcem 025+ Industrial Screed onto Concrete Substrate Using Two Coats of Tekprime (Bonded System)

1. Substrate Requirements

Substrate Type:
Concrete slab suitable for bonded screed systems.

Minimum Compressive Strength:
25 MPa.

Condition:

- Structurally sound, solid, and continuous.
- All cracks and surface defects to be repaired to provide a flush, stable finish.
- Free from laitance, dust, oil, grease, curing agents, and other contaminants.
- Dry, with surface relative humidity ≤75% (BS 8203).
- Flat and level; significant deviations corrected prior to screed application.

2. Mechanical Surface Preparation

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

Cleaning:
Remove all dust and contaminants using industrial vacuum equipment.

Moisture Testing:
Conduct moisture testing to 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 to 1 part neat Tekprime (3:1).

Coat 1:
Apply first diluted coat with a roller or squeegee. Allow to fully dry and film form (minimum 1–2 hours depending on site conditions).

Coat 2:
Apply a second identical coat. Ensure the primer is fully cured before applying Tekcem 025+ Industrial.

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 025+ Industrial Screed Specification

Product:
Tekcem 025+ Industrial – single-part, shrinkage-compensated, fast-setting floor topping.

Water Addition:
5.5 litres per 25kg unit (maximum 6 litres). Do not exceed water limit to avoid strength loss and extended drying times.

Properties:

- Working time: 20–30 minutes at 20 °C
- Light foot traffic: ~3 hours
- Light forklift traffic: ~24 hours
- Full service 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 (Bonded Systems):
Minimum 3 mm, maximum 25 mm in a single application.

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5. Screed Application

Mixing:
Add powder to water slowly while mixing using a slow-speed drill and paddle or screed pump. Mix until uniform. Allow to stand 2 minutes, remix, and apply immediately. Use mix within 30 minutes.

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

Layering:
Where thickness >25 mm is required, apply in multiple layers. Allow previous layer to cure before applying subsequent layer.

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

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6. Post-Installation

Drying & Overlay:

- Light foot traffic: after 3 hours
- Floor finishes (e.g. tiles): after 3 hours
- Resilient floor finishes: after 24 hours
- Industrial coatings: Only when residual moisture and strength are compatible

Drying Guidance:
For thicknesses more than 10 mm, extended drying times should be expected. A typical guideline is 1 day per 10 mm in good drying conditions. Low temperatures and high humidity will prolong drying. RH testing is always recommended prior to the application of floor finishes, in accordance with British Standards.

Curing:
No curing membrane is required; however, avoid rapid drying conditions such as direct sunlight or strong draughts.

Access:
Light traffic after 3 hours, full traffic after 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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