



# Model Specification for Installation of Tekcem 025+ Industrial Screed onto Concrete Substrate Using Two Coats of Tekprime and Finished with Tekcem Matte Seal (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, 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  $\leq 75\%$  (BS 8203).
  - Flat and level; significant deviations corrected prior to screed application.
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## 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  $\leq 75\%$ . If higher, install a suitable moisture-tolerant DPM before priming.

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## 3. Primer Application (Two Coats Tekprime)

### Primer:

Tekcem Tekprime.

### Dilution Ratio:

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

**Application:**

- Apply first diluted coat with a roller or squeegee. Allow to fully dry (approx. 1–2 hours).
- Apply a second identical coat. Ensure the second coat is fully cured before screed application.
- Avoid pooling and ensure uniform coverage across the surface.

**Coverage:**

Approx. 170 m<sup>2</sup> per 5 litres of Tekprime at 3:1 dilution (per coat, subject to substrate porosity).

**Conditions:**

Apply only when substrate temperature is 5–30 °C and RH is below 75%.

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**4. Tekcem 025+ Industrial Screed Specification****Product:**

Tekcem 025+ Industrial – single-part, shrinkage-compensated, high-durability floor topping.

**Water Addition:**

5.5 litres per 25kg unit (maximum 6 litres). Do not exceed water limit.

**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:**

Minimum 3 mm, maximum 25 mm in a single application.

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## 5. Screed Application

### Mixing:

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

### Placement:

Pour or pump screed directly onto primed surface. Spread to required thickness with a steel trowel and finish with a spiked roller to remove air bubbles.

### Layering:

If thickness >25 mm is needed, apply in layers not exceeding 25 mm. Allow each layer to cure before applying the next.

### Environmental Conditions:

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

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## 6. Sealer Application – Tekcem Matte Seal

### Surface Preparation:

Ensure Tekcem 025+ Industrial screed is fully dry before applying sealer. Residual moisture or uncured screed may cause staining or adhesion issues.

### Mixing:

Pour resin into curing agent container and mix thoroughly using a slow-speed paddle for a minimum of 2 minutes.

### Application:

- Apply with a squeegee, roller, or brush at 4–5 m<sup>2</sup>/kg per coat.
- Avoid pooling. Ensure full and even coverage.
- Allow first coat to dry (minimum 16 hours at 20 °C) before applying the second coat (within 48 hours).
- Ensure good ventilation during and after application.

### Curing:

- Dry to touch: 16 hours at 20 °C
- Full cure: 7 days
- Avoid water contact for 24 hours after application.

### Properties:

- Clear, matte finish
- Excellent abrasion and chemical resistance



- Suitable for dry or damp surfaces
  - Environmentally friendly, solvent-free
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## 7. Post-Installation Guidance

### Drying Times:

- Screed thicknesses over 10 mm will require extended drying.
- Allow 1 day per 10 mm thickness in good drying conditions.
- Low temperatures and high humidity will significantly extend drying.
- Always confirm screed is dry prior to sealing or applying finishes.

### RH Testing:

Residual moisture testing is essential prior to the application of floor finishes, in line with British Standards (e.g. BS 8203).

### Access:

- Light foot traffic: after 3 hours
- Full site traffic: after 7 days
- Do not subject Matte Seal to heavy wear until fully cured (7 days)

## 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.