



Model Specification for Installation of Tekcem 220 Leveller onto Asphalt / Bitumen Residue Substrate Using Tekcem TekGrip (Bonded System)

1. Substrate Requirements

Substrate Type:

Asphalt, bituminous screed, or bitumen residue suitable for bonded levelling and smoothing.

Minimum Compressive Strength:

Not applicable (substrate must be hard, stable, and fully bonded to its base).

Condition:

- Stable, well-bonded, and free from soft or degraded material.
 - Remove all loose, friable, or tar-contaminated areas.
 - Surface must be clean, dry, and free from dust, oil, grease, and contaminants.
 - No evidence of bleeding or exudation of bitumen.
 - Surface temperature $\geq 5^{\circ}\text{C}$ and at least 3°C above dew point during application.
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2. Mechanical Surface Preparation

Method:

Lightly abrade or mechanically clean to remove oxidation and create a keyed surface without exposing aggregates.

Cleaning:

Vacuum thoroughly to remove dust and debris.

Moisture Testing:

Confirm surface is dry and free of trapped moisture.

If moisture is present, allow to dry naturally before priming.

3. Primer Application (Tekcem TekGrip)

Primer:

Tekcem TekGrip – ready-to-use, fast-drying, textured bonding primer for absorbent and non-absorbent substrates including asphalt and bitumen residues.

**Application Method:**

- Shake container thoroughly to distribute aggregate.
- Apply **one uniform coat** using a roller or brush ensuring complete coverage.
- Avoid pooling or over-application.
- Work the primer into the surface to promote full contact.
- Allow to **dry completely (approx. 20–30 minutes @ 20 °C)** before applying Tekcem 220+.
- Do not dilute.

Coverage:

Approx. 0.075 – 0.11 kg/m² ($\approx$ 9 – 13 m² per litre) depending on surface texture.

Conditions:

Apply between +5 °C and +30 °C.

Ensure substrate and ambient RH < 75 %. Avoid condensation and direct heat 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 maintain strength and drying performance.

Properties:

- Working time: 20 – 30 minutes @ 20 °C
- Light foot traffic: $\sim$ 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 10 mm on asphalt or bitumen residues.

Do not exceed 10 mm to avoid thermal stress or bond failure.

5. Screed Application

Mixing:

Add powder gradually to clean water while mixing with a slow-speed drill and paddle or screed pump.

Mix until homogeneous and lump-free.

Allow to stand 2 minutes, re-mix, and apply immediately. Use within 30 minutes of mixing.

**Placement:**

Pour or pump onto the primed substrate.

Spread evenly using a steel trowel and finish with a spiked roller to remove trapped air.

Environmental Conditions:

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

6. Post-Installation

Drying & Overlay:

- Light foot traffic: ~ 2 – 3 hours @ 20 °C
- Tiled finishes: after 3 hours @ 3 mm
- Other floor finishes: after 24 hours @ 3 mm
- Confirm residual moisture is within limits before finishing.

Drying Guidance:

At 3 mm, typical drying time is 3 – 4 hours under good ventilation.

Cool or humid conditions extend drying time.

Curing:

No curing membrane required; avoid rapid drying from direct 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 is sound, clean, and free of soft bitumen or tar.
- Only use Tekcem TekGrip for bituminous surfaces to ensure bond integrity.
- Maximum thickness on asphalt substrates is 10 mm.

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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