



Model Specification for Installation of Tekcem Ultra Screed Unbonded Over Concrete Using 1200-Gauge DPM (Including Perimeter Edge Strip and Taping)

1. Substrate Requirements

- **Substrate Type:** Concrete slab.
- **Condition:**
 - Substrate must be **sound, clean, and free** from dust, laitance, oil, grease, curing agents, and any other surface contaminants.
 - Substrate must be **sufficiently level** to allow for uniform screed thickness without sudden changes or hollows.
 - Substrate should be dry where possible; where moisture is present, a suitable DPM system must be employed.

2. Installation of Separating Membrane (1200-Gauge DPM)

- **Membrane Type:**
 - **1200-gauge polyethylene damp proof membrane (DPM)**, suitable for use beneath cementitious screeds.
- **Installation Method:**
 - Lay the 1200-gauge DPM loosely over the prepared concrete surface.
 - **Overlap all joints by a minimum of 150mm.**
 - **Double-sided tape** should be applied beneath the overlaps to create a bond between adjoining sheets.
 - **Single-sided tape** should then be applied over the top of the overlaps to seal the joints completely.
 - Care must be taken to **turn the DPM up at all perimeter walls and around any service penetrations**, to a height above the finished screed level.
 - Ensure the membrane is **tight to the substrate** without significant wrinkles or trapped air pockets.
- **Manufacturer's Guidance:**
 - Installation must be carried out in accordance with the **specific membrane manufacturer's recommendations** regarding bonding, sealing, overlaps, and detailing at perimeters and penetrations.

3. Installation of Perimeter Edge Strip

- **Material:**
 - Closed-cell polyethylene foam or similar approved material.
- **Dimensions:**
 - **Thickness:** Typically **5mm to 10mm**.
 - **Height:** Must be **at least the full depth of the screed** (minimum 35mm or 40mm).



- **Placement:**
 - Install around all **internal and external walls, columns, door frames, and fixed vertical elements** before screed placement.
 - Ensure a continuous, unbroken perimeter strip to allow for expansion, contraction, and isolation of the screed from rigid elements.

4. Tekcem Ultra Screed Specification

- **Mix Design (per m³):**
 - 400 kg Cement (CEM I, 42.5N)
 - 1600 kg 0–4 mm Screeding Sand (to BS EN 13139)
 - 2400 ml Tekcem Ultra Admixture
 - 55–60 litres Water (adjusted for aggregate moisture content)
 - 1 kg PP fibres (recommended for areas with underfloor heating or thermal cycling).
- **Consistency:**
 - Semi-dry; should form a ball when squeezed without bleeding water.
- **Working Life:**
 - 45–60 minutes from mixing.

5. Screed Application

- **Placement:**
 - Spread the Tekcem Ultra screed directly onto the **1200-gauge DPM**.
 - Compact by tamping and finish with a plastic float or light steel trowel.
- **Thickness:**
 - **Minimum:** 35mm for standard applications.
 - **Heavy Duty Areas:** 40mm minimum thickness recommended.
- **Compaction:**
 - Thorough compaction is required across the full screed thickness to avoid voids and maximise structural performance.
- **Environmental Conditions:**
 - Substrate and ambient temperatures should be between **5°C and 30°C**.
 - Ambient relative humidity should not exceed **75% RH** during installation.

6. Post-Installation

- **Protection:**
 - Protect the screed from rapid drying, direct sunlight, draughts, frost, and heavy rainfall for at least the first 24 hours.
 - Temporary coverings or protective sheeting may be used as necessary.
- **Access:**
 - Light foot traffic permitted after 12–24 hours.
 - Full site traffic permitted after 72 hours depending on thickness and site conditions.
- **Floor Finishes:**



- Screed must be fully cured and residual moisture confirmed as suitable for subsequent floor coverings (typically $\leq 75\%$ RH).

7. Limitations

- Ensure complete coverage of the concrete substrate with the 1200-gauge DPM without damage or puncture.
- Properly install and tape all laps using double-sided and single-sided tapes in accordance with membrane manufacturers' instructions.
- Perimeter edge strip must be installed before screed placement and be continuous.
- Screed thickness must meet or exceed minimum requirements: 35mm (standard) or 40mm (heavy duty).
- Do not apply screed in temperatures below 5°C.
- Isolate screed at all vertical elements (walls, columns, etc.).

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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