



Model Specification for Installation of Tekcem Ultra Screed Unbonded Over Concrete Using 500-Gauge Separating Membrane (Including Perimeter Edge Strip)

1. Substrate Requirements

- **Substrate Type:** Concrete slab.
- **Condition:**
 - Substrate must be **sound, clean, and free** from dust, laitance, oil, grease, curing agents, or any other contamination.
 - Must be **sufficiently level** to allow for a uniform screed thickness without sudden high spots or hollows.
 - Substrate should be dry or protected against rising moisture with an appropriate DPM if necessary.

2. Installation of Separating Membrane

- **Membrane Type:**
 - **500-gauge polyethylene sheet** or equivalent polythene membrane.
- **Installation:**
 - Lay the membrane loosely over the prepared concrete surface.
 - **Lap membrane joints by at least 100mm** and tape securely to prevent movement.
 - Turn the membrane up at all perimeter walls and around penetrations to a height greater than the final screed depth.
 - Ensure the membrane is wrinkle-free and fitted tightly to prevent voids under the screed.

3. Installation of Perimeter Edge Strip

- **Material:**
 - Closed-cell polyethylene foam or similar suitable edge insulation material.
- **Dimensions:**
 - **Thickness:** Typically **5mm to 10mm**, depending on design.
 - **Height:** **At least equal to the thickness of the screed** being applied (minimum 35mm or 40mm for heavy-duty areas).
- **Placement:**
 - Install around all **internal and external walls**, columns, door frames, and any fixed vertical elements before placing the screed.
 - Ensure a continuous, unbroken strip to allow for screed movement and to isolate the screed from rigid structures, preventing cracking.



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)
 - 1 kg PP fibres (optional, beneficial for controlling thermal movement and shrinkage).
- **Consistency:**
 - Semi-dry; should form a ball when squeezed without bleeding free water.
- **Working Life:**
 - 45–60 minutes from mixing.

5. Screed Application

- **Placement:**
 - Spread Tekcem Ultra screed directly onto the **separating membrane**.
 - Compact by tamping and finish using a plastic float or light steel trowel.
- **Thickness:**
 - **Minimum screed thickness:**
 - **35mm** for standard applications.
 - **40mm** for **heavy-duty** areas subject to heavier traffic.
- **Compaction:**
 - Ensure thorough consolidation throughout the screed to eliminate voids and maximise performance.
- **Environmental Conditions:**
 - Apply when substrate and ambient temperatures are between **5°C and 30°C**.
 - Ambient relative humidity should be **below 75% RH**.

6. Post-Installation

- **Protection:**
 - Protect newly laid screed from direct sunlight, strong draughts, frost, and rapid drying for the first 24 hours.
 - Use plastic sheeting or other appropriate covers if required.
- **Access:**
 - Light foot traffic may be permitted after 12–24 hours.
 - Full site traffic after 72 hours, depending on screed thickness and conditions.
- **Floor Finishes:**
 - Ensure the screed is fully cured and moisture levels are below the requirements of the floor finish manufacturer before installation (typically ≤75% RH).



7. Limitations

- Screed must always be **isolated** from walls, columns, and other vertical elements with an appropriate perimeter edge strip.
- Unbonded screeds must be applied over a correctly installed separating membrane.
- Screed thickness must not be reduced below **35mm** (or **40mm** for heavy-duty areas).
- Do not apply screed at ambient or substrate temperatures below 5°C.
- Movement joints in the substrate should be reflected through the screed if required.

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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