



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

1. Substrate Requirements

Substrate Type:

Concrete slab.

Condition:

- Must be structurally sound, clean, and free from dust, laitance, oil, grease, curing agents, or contaminants.
 - Should be level and free from sharp protrusions or voids.
 - If rising moisture is a risk, install a suitable DPM beneath the separating membrane.
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2. Installation of Separating Membrane

Membrane Type:

500-gauge polyethylene sheet or equivalent.

Installation:

- Lay loosely over the concrete substrate.
 - Overlap joints by minimum 100 mm and secure with single-sided tape.
 - Turn up membrane at all perimeter walls and penetrations to a height greater than the final screed thickness.
 - Ensure the membrane is flat, wrinkle-free, and tightly fitted to avoid voids.
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3. Installation of Perimeter Edge Strip

Material:

Closed-cell polyethylene foam or other suitable resilient insulation.

Dimensions:

- Thickness: 5–10 mm
- Height: Equal to or greater than final screed thickness (typically ≥ 35 mm or ≥ 40 mm for heavy-duty use)

**Placement:**

Install around all internal/external walls, columns, door frames, and vertical fixtures. Must be continuous and unbroken to allow for screed movement and avoid cracking.

4. Tekcem Tekscreed Specification**Mix Design (per m³):**

- 400 kg Ordinary Portland Cement (CEM I 42.5N)
- 1600 kg 0–4 mm screeding sand (BS EN 13139 fines category 1)
- Tekcem Tekscreed admixture (dosage per current TDS)
- Water: 50–60 litres, adjusted to sand moisture
- Optional: 1 kg polypropylene fibres for added shrinkage and thermal crack control

Consistency:

Semi-dry – the mix should form a ball when squeezed without bleeding free water.

Working Life:

Approximately 45–60 minutes after mixing.

5. Screed Application**Placement:**

Apply Tekcem Tekscreed directly onto the separating membrane.

Method:

Compact by tamping and level with screed bars. Finish with a plastic float or light steel trowel.

Screed Thickness:

- Minimum 35 mm for standard/light duty use
- Minimum 40 mm for commercial or heavy-duty traffic areas

Compaction:

Thorough compaction is essential throughout to eliminate voids and achieve performance.

Environmental Conditions:

- Substrate and ambient temperature: 5–30 °C
 - Relative humidity: <75%
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6. Post-Installation

Protection:

Cover the screed to protect from frost, direct sunlight, wind, and rapid drying. Maintain protection for at least 24 hours post-installation.

Access:

- Light foot traffic: after 12–24 hours
- Full site traffic: after ~72 hours (site and thickness dependent)

Floor Finishes:

Screed must be sufficiently cured and tested for RH $\leq$ 75% before applying floor finishes.

7. Limitations

- Always isolate screed from all vertical structures with a perimeter strip.
 - Screed must not be less than 35 mm in any area (40 mm for heavy-duty).
 - Unbonded screeds must only be laid over a correctly installed membrane.
 - Avoid screed application when temperatures are below 5 °C.
 - Reflect substrate movement joints through screed where required.
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8. Disclaimer

This specification is based on Tekcem's expertise and current product knowledge. It is intended as a guide for best practice but does not replace appropriate professional advice, detailed design, or site-specific assessment. Tekcem Ltd accepts no liability for misuse or deviation from the guidance provided. Installers must ensure that the specification is suitable for their particular application and that appropriate quality control and testing is conducted throughout the process.

Tekcem Tekscreeed_Unbonded 500 gauge _concrete _without UFH _May2025_R1