



Model Specification for Installation of Tekcem Ultra Screed onto Metal Substrate or Staircase / Landing Using Tekcem SF Membrane (Wet-on-Wet Application)

1. Substrate Requirements

- **Substrate Type:** Rigid **metal base** or **metal staircase**.
- **Condition:**
 - The metal substrate must be **structurally sound, stable, and rigid** with **minimal flex or movement** under load.
 - Surfaces must be **clean, dry, and free** from rust, mill scale, paint, oil, grease, or any contaminant that could impair bonding.

2. Surface Preparation

- Mechanically prepare the metal surface by **abrasive blasting**, mechanical grinding, or similar to expose a **bright metal finish** (Sa 2½ standard or equivalent).
- Remove all loose scale, rust, contaminants, and ensure a surface profile that enhances mechanical bonding.
- **Cleaning:**
 - Following preparation, clean the surface thoroughly to remove all dust and residues (vacuum clean and/or solvent wipe as appropriate).
- **Moisture:**
 - Ensure the surface is dry prior to application of bonding materials.

3. Application of Tekcem SF Membrane (Bonding System)

- **Mixing:**
 - Mix the Tekcem SF Membrane curing agent into the base resin thoroughly for at least 2 minutes until fully uniform.
- **Application:**
 - Apply a continuous, even **layer of Tekcem SF Membrane** over **all areas where the screed will be in contact with the metal**, using a brush, roller, or squeegee.
 - Coverage rate: approximately **3 m²/kg**.
 - Ensure **full, unbroken coverage** — no bare metal should remain exposed where screed is to be applied.
- **Wet-on-Wet Screeding:**
 - While the Tekcem SF Membrane remains **wet** (typically within 30 minutes of application), immediately apply the Tekcem Ultra screed.
 - **No trafficking** of the wet SF Membrane is permitted to avoid contamination and loss of bond.



- **Important:**
 - If any areas of SF Membrane start to cure before screeding, reapply fresh membrane prior to screeding.

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 based on aggregate moisture)
 - 1 kg PP fibres (optional, for increased thermal movement control).
- **Consistency:**
 - Semi-dry; forms a ball when squeezed without bleeding free water.
- **Working Life:**
 - 45–60 minutes after mixing.
- **Thickness:**
 - Screed must be applied to a thickness sufficient to **reach the full height of the stair tread** or as specified in project drawings.
 - Typical screed thickness to suit depth and rise of treads — project-specific.

5. Screed Application

- **Method:**
 - Place and spread Tekcem Ultra screed **directly into the wet Tekcem SF Membrane**.
 - Tamp, float, and lightly trowel to achieve full compaction, filling stair tread shapes and profiles completely.
- **Compaction:**
 - Ensure thorough consolidation to prevent voids and ensure monolithic contact with the bonding layer.
- **Environmental Conditions:**
 - Apply when substrate and ambient temperatures are between **5°C and 30°C**.
 - Ambient humidity during application should be **below 75% RH**.

6. Post-Installation

- **Protection:**
 - Protect freshly placed screed from direct sunlight, frost, heavy rain, and draughts during the first 24 hours.
- **Access:**
 - Light foot traffic may be permitted after 12–24 hours.
 - Full site traffic after 72 hours, depending on screed thickness and site conditions.
- **Floor Finishes:**
 - Ensure screed is fully cured and dry to acceptable levels before applying any subsequent finishes.



7. Limitations

- Screeding must be carried out while Tekcem SF Membrane is still **wet**.
- All metal surfaces to receive screed must have a **continuous layer of SF Membrane** — no bare areas permitted.
- The substrate must be rigid and free of excessive deflection; excessive movement can cause cracking or de-bonding.
- Screed depth to be designed to suit stair tread depth or specified project requirements.

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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