



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

1. Substrate Requirements

Substrate Type:

Rigid metal base or staircase.

Condition:

- Must be structurally sound and rigid with minimal flex.
 - Surfaces must be dry, clean, and free from rust, paint, mill scale, oil, grease, or any contaminants affecting adhesion.
 - No excessive deflection under loading.
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2. Surface Preparation

- Mechanically prepare the metal substrate by abrasive blasting, grinding or equivalent to achieve a bright metal finish (Sa 2½ standard or similar).
- Ensure an enhanced surface profile to promote mechanical adhesion.

Cleaning:

After surface prep, remove all residues via vacuum and/or solvent wiping.

Moisture:

Confirm surface is dry before applying bonding materials.

3. Application of Tekcem SF Membrane (Bonding System)

Mixing:

Mix Tekcem SF Membrane curing agent thoroughly into base resin for a minimum of 2 minutes until homogeneous.

Application:

- Apply an even, continuous layer of SF Membrane to all areas receiving screed using brush, roller, or squeegee.
- Coverage approx. 3 m²/kg.
- No bare metal should be visible.



Wet-on-Wet Screeding:

- Place screed while the SF Membrane remains wet (typically within 30 minutes).
 - If cured, reapply fresh membrane before screeding.
 - Prevent trafficking of uncured SF Membrane.
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4. Tekcem RapidoWITT Screed Specification

Typical Mix Design (per m³):

- 265 kg Tekcem RapidoWITT
- 1850 kg 0–4 mm screeding sand (to BS EN 13139)
- 900 g PP fibres
- Approx. 85 litres water (adjust to suit sand moisture)

Properties:

- Semi-dry consistency – hand-formed ball with no water bleed
- Workable for approx. 45–60 minutes
- Trafficable: after ~12 hours
- Strength: $\geq$ CT-C35-F5
- Floor finish readiness: ≤ 2 CM% residual moisture (typically from day 10)

Thickness:

- Screed must reach full stair tread depth or as per project specification.
 - Minimum 20 mm for bonded systems (can go down to 15 mm with epoxy bonding if needed).
 - Max single layer depth: 75 mm; thicker builds must be layered and scratch keyed.
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5. Screed Application

Method:

- Place screed directly onto wet Tekcem SF Membrane.
- Tamp, float, and trowel to ensure complete fill of stair tread shapes and proper compaction.

Compaction:

Full consolidation to eliminate voids and ensure bond integrity.

Environmental Conditions:

- Substrate & ambient temperatures: 5–30°C



- Relative humidity: <75% during application
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6. Post-Installation

Protection:

Protect screed from frost, rapid drying, and direct sun for at least 24 hours.

Access:

- Light foot traffic: 12–24 hours
- Light loading: ~72 hours
- Full drying and curing under natural conditions (do not force dry).

Finishes:

Do not apply coverings until screed is fully dry and moisture is ≤ 2 CM% or $\leq 75\%$ RH.

7. Limitations

- Screed must be applied wet-on-wet over SF Membrane.
 - Do not apply to metal surfaces without full SF Membrane coverage.
 - Substrate must be rigid; excessive movement may cause cracking or debonding.
 - Screed thickness should suit the stair tread design or drawing.
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8. Disclaimer

This document is provided in good faith based on Tekcem's expertise and current knowledge. It does not replace appropriate design judgement, site assessment, or conformance with applicable regulations. Tekcem Ltd is not liable for deviations from the specification or incorrect use of products.

The installer must confirm suitability and undertake appropriate quality control before and during application.