Model Specification for Installation of Tekcem RapidoWITT Screed onto Concrete Substrate Using Tekcem Bonding Slurry (Tekpol SBR)

1. Substrate Requirements

Substrate Type:
Concrete slab.

Minimum Compressive Strength:
25 MPa.

Condition:

- Substrate must be solid, sound, clean, and dry.
- Free from dust, laitance, oil, grease, curing agents, paint, and other surface contaminants.
- Must be flat and level to avoid localised stress points which may lead to cracking or debonding.
- Sub-floors directly to earth must have an effective DPM.

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2. Mechanical Surface Preparation

- Mechanically abrade the surface by vacuum grit blasting, scabbling, or shot-blasting to expose coarse aggregate and create a textured mechanical key.
- Remove all dust and debris by vacuuming.
- Moisture testing to be carried out in accordance with BS 8203.
- Substrate must be dry with <75% RH unless a suitable DPM is applied.

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3. Application of Tekcem Bonding Slurry (Tekpol SBR System)

Mix Composition:

- 1 part Tekpol SBR
- 1 part clean water
- 3 parts OPC

Mix by weight or volume into a lump-free, creamy slurry.

Coverage:
Approx. 3 m² per kg of slurry (depends on substrate porosity and texture).

Application:

- Apply using a stiff brush or broom.
- Work thoroughly into surface for complete contact.

Timing:

- Wet-on-wet application only.
- Slurry must not dry or skin before screed placement.
- Reapply if setting begins before screeding.

Traffic Control:

- No trafficking permitted on applied slurry.
- Screed must be applied immediately over fresh slurry.

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4. Tekcem RapidoWITT Screed Specification

Typical Mix Design (per m^3):

- 265 kg Tekcem RapidoWITT
- 1850 kg 0–4 mm Screeding Sand (to BS EN 13139)
- 900 g PP Fibres
- Approx. 85 litres water (adjust for aggregate moisture)

Properties:

- Semi-dry consistency – cohesive when hand-formed, with no water bleed.
- Workable for 45–60 minutes after mixing.
- Strength: ≥ CT-C35-F5
- Walkable after 12 hours (subject to site conditions).
- Floor finishes may be applied from 10 days, pending ≤2 CM% residual moisture.

Thickness:

- Bonded: 20–40 mm (down to 15 mm with suitable aggregate and epoxy bonding agent)
- Unbonded: ≥40 mm (≥40 mm for heavy duty)
- Floating: ≥55 mm, or ≥65 mm for heavy duty
- UFH cover: minimum 35 mm

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5. Screed Application

Method:

- Lay screed directly into wet bonding slurry.
- Compact with a screed bar.
- Finish with a plastic float and steel trowel for a smooth surface.
- For depths >75 mm, apply in two layers; scratch-key and compact each layer separately within 45 minutes.

Environmental Conditions:

- Substrate & ambient temperature: 5°C to 30°C
- Ambient RH: <75%
- Cure under polythene for minimum 5 days after installation.

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6. Post-Installation

Protection:

- Protect screed from frost, rapid drying, and direct sunlight during the initial cure.

Access:

- Light foot traffic: ~12–24 hours
- Light site loading: ~72 hours
- Underfloor heating heat-up cycle may begin from Day 4 (refer to heating protocol).

Floor Finishes:

- Only apply once moisture ≤2 CM% or ≤75% RH, or as per floor finish manufacturer's recommendations.

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7. Limitations

- Do not apply slurry or screed to contaminated or damp substrates without proper preparation.
- Bonding slurry must remain wet at screed application.
- Avoid use in high RH areas without appropriate DPM/bonding agent.
- Screed must not be force-dried or exposed to extreme drying conditions.
- Partially bonded screeds are not permitted.

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8. Disclaimer

The information provided herein is based on Tekcem's expertise and is intended to guide the proper installation of Tekcem products. This document does not substitute for professional judgement, site-specific evaluation, or adherence to local standards. Tekcem Ltd accepts no liability for misuse, deviation from guidance, or failure to verify suitability for individual applications.

Installers are responsible for conducting appropriate quality checks and ensuring conformity to applicable codes and project requirements.