



Model Specification for Installation of Tekcem Tekscreeed Screed onto Concrete Substrate Using SBR Bonding Agent (50 kg OPC Batch)

1. Substrate Requirements

Substrate Type:

Concrete slab suitable for bonded screed systems.

Minimum Compressive Strength:

25 MPa.

Condition:

- Structurally sound, solid, and continuous.
 - All voids and cracks repaired to produce a stable, flush surface.
 - Clean, dry, and free from laitance, dust, oil, grease, curing agents, and other contaminants.
 - Flat and level; significant deviations must be corrected prior to screed application.
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2. Mechanical Surface Preparation

Method:

Mechanically abrade the surface using vacuum-assisted shot blasting, grinding, or equivalent to expose a clean, textured surface.

Cleaning:

Remove all dust and surface contaminants. The substrate must be visibly clean and open-textured to receive the bonding slurry.

Moisture Testing:

Conduct moisture testing in accordance with BS 8203. Surface relative humidity (RH) must be $\leq 75\%$. If higher, a suitable moisture-tolerant DPM must be used.

3. Application of SBR Bonding Agent

Slurry Bonding Coat (per 50 kg OPC):

- 5 litres SBR
- 10 litres clean water
- 15 kg OPC (approx.)



Mixing Instructions:

- Thoroughly mix the water and SBR.
 - Slowly add OPC to form a smooth, brushable slurry.
 - Apply slurry evenly to the prepared surface using a stiff brush.
 - **Place the screed wet-on-wet into the freshly applied slurry bonding coat.**
 - **Do not allow the slurry to dry before screed placement.**
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4. Tekcem Tekscreed Screed Specification

Mix Design (per 50 kg OPC):

- 50 kg Ordinary Portland Cement (OPC)
- 2 x 200 g Tekcem Tekscreed sachets (1 sachet per 25 kg cement)
- 180–250 kg 0–4 mm screeding sand (BS EN 13139, fines category 1)
- Water: Add gradually to achieve semi-dry, cohesive consistency

Properties:

- Working time: 45–60 minutes
- Semi-dry mix: forms a ball in the hand without bleeding water
- Compressive strength:
 - Standard: >25 N/mm²
 - Heavy Duty: >30 N/mm²
- Light foot traffic: ~24 hours
- Full site traffic: ~7 days
- Drying time: ~7 days per 25 mm under ideal conditions

Thickness Guidelines (Bonded Systems Only):

- **Standard bonded screed thickness:** 25 mm minimum
 - **Reduced thickness:** 15 mm **only** when bonded with an epoxy bonding agent (Refer to Tekcem SF Membrane data sheet for full guidance)
 - **Maximum layer thickness:** 75 mm
 - Where greater depths are needed, build up in multiple layers. Each layer must be fully compacted and scratch-keyed, and the next applied within 45 minutes to maintain monolithic bond.
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5. Screed Application

Mixing:

Pre-mix OPC, Tekscree, and sand dry. Gradually add water while mixing until a semi-dry, workable consistency is achieved. Mix for a minimum of 3 minutes.

Placement:

- Place screed directly onto wet bonding slurry.
 - Tamp and float to level and compact the screed.
 - Finish using a steel trowel if required.
 - Pay particular attention to thorough compaction at edges, corners, and around services to prevent voids.
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6. Post-Installation

Curing:

Cover with polythene or damp hessian immediately after finishing. Maintain for a minimum of 7 days to prevent premature drying.

Drying:

Allow to dry naturally. Avoid forced drying, direct heat, or strong draughts during early curing.

Environmental Conditions:

- Substrate temperature: 5–30 °C
- Ambient relative humidity: <75%

Underfloor Heating (if applicable):

- May be introduced after 7 days of curing.
- Begin with low temperature and increase gradually (e.g. 2 °C per day).
- Confirm the screed is <75% RH before commissioning or applying floor finishes.

Access:

- Light foot traffic: ~24 hours
- Full site traffic: ~7 days

Floor Finishes:

Ensure residual moisture is $\leq 75\%$ RH or within floor finish manufacturer's tolerances before installation.



7. Limitations

- Do not install below 5 °C or if temperatures are expected to fall during the curing period.
 - Screed must be protected from frost, rapid drying, and direct sunlight in the first 24–72 hours.
 - Do not apply as a partially bonded system.
 - Where unbonded or floating screeds are used, install an appropriate membrane and reinforcement.
 - **Bonded screeds at 15 mm are only permitted with epoxy bonding systems** (e.g. Tekcem SF Membrane).
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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.

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