Model Specification for Installation of Tekcem 025 Industrial Screed onto 18 mm Moisture-Resistant Chipboard Using One Coat of Tekcem SF Membrane with Quartz Scatter and Reinforced with Glass Fibre Mesh (Bonded System – No Sealer, 7–20 mm Thickness)

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1. Substrate Requirements

Substrate Type:
18 mm moisture-resistant chipboard (e.g. P5-grade).

Condition:

- Boards must be **flooring grade**, **structurally stable**, and **firmly fixed** to eliminate movement.
- Fully braced with **screw fixings at 150 mm centres on board edges** and **300 mm centres in the field**.
- All joints must be tightly butted and stable. Damaged or flexing panels must be replaced or reinforced.
- Free from contamination, wax, sealer, oil, dust, or adhesive residues.
- Substrate RH must not exceed **75%**.

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2. Mechanical Surface Preparation

Method:
Abrade the surface to remove factory-applied sealer or surface compression and promote adhesion.

Cleaning:
Thoroughly vacuum to remove loose debris and dust after preparation.

Moisture Testing:
Confirm RH is ≤75% in accordance with **BS 8203**.

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3. Bonding Agent – Tekcem SF Membrane (Single Coat with Quartz Scatter)

Product:
Tekcem SF Membrane – solvent-free, two-part epoxy resin for screed bonding over timber and non-absorbent substrates.

Quartz Scatter:
Tekcem Quartz (0.7–1.2 mm), broadcast full blind at ~2 kg/m².

Mixing:
Add curing agent to resin base and mix thoroughly using a mechanical stirrer for a minimum of 2 minutes until uniform in colour and consistency.

Application:

- Apply **one coat** at ~3 m²/kg with roller or squeegee.
- While the membrane is still **wet**, immediately broadcast Tekcem Quartz at ~2 kg/m² to fully blind the surface.
- Allow to cure for at least 14 hours at 20 °C.
- Once cured, remove all loose, unbonded quartz by sweeping and vacuuming.

This application acts as a **bonding layer** only (not a DPM). Screeding should not proceed if RH exceeds 75%.

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4. Reinforcement Layer – Tekcem Glass Fibre Mesh

Product:
Tekcem Glass Fibre Mesh – alkali-resistant, 10 mm × 10 mm aperture mesh, 145 g/m².

Application:

- Lay mesh directly over the cured quartz-scattered surface.
- Overlap mesh by at least 50 mm.
- Lightly pin or weight to keep in place during screed application.
- Ensure mesh remains **fully encapsulated** within the screed depth and is positioned in the **middle third** of the section.

Reinforcement mitigates the risk of cracking due to minor substrate movement and thermal or shrinkage stresses.

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5. Tekcem 025 Industrial Screed Specification

Product:
Tekcem 025 Industrial – shrinkage-compensated, high-strength, single-part, cementitious screed.

Water Addition:
5.5 litres per 25 kg (maximum 6 litres). Do not exceed.

Performance:

- Working time: 20–30 minutes
- Light foot traffic: ~3 hours
- Light forklift traffic: ~24 hours
- Full traffic: ~7 days
- Compressive strength:
    - 15 MPa (1 day)
    - 25 MPa (7 days)
    - 30 MPa (28 days)
- Flexural strength:
    - 4 MPa (1 day)
    - 6 MPa (7 days)
    - 7 MPa (28 days)

Application Thickness (Bonded Over Chipboard):

- **Minimum:** 7 mm
- **Maximum:** 20 mm

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6. Screed Application

Mixing:
Add powder to water gradually while mixing with a slow-speed drill or pump mixer. Let stand for 2 minutes, remix, and use within 30 minutes.

Placement:
Apply screed directly over the **fully cured, quartz-scattered SF Membrane and embedded mesh**. Spread with a steel trowel and finish with a spiked roller to remove trapped air.

Environmental Conditions:

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

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7. Post-Installation Guidance

Drying Time:
Approx. **1 day per 10 mm** in good drying conditions. Low temperature and poor ventilation will extend drying time.

RH Testing:
Conduct moisture testing in accordance with **BS 8203** before applying any floor coverings.

Access:

- Light foot traffic: ~3 hours
- Full site traffic: ~7 days

Finishes:
No resin sealer is applied. Ensure screed is dry, clean, and within moisture tolerance for the chosen finish.

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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