



Tekcem 550 Fibre

Preparation of all common substrates, such as sand / cement screeds, concrete, sound asphalt, calcium sulphate screeds, ceramic, quarry and natural stone tiles, underfloor heating, plywood and timber boards to receive floor finishes.



Overview

TEKCEM 550 FIBRE-REINFORCED LEVELLER is ideal for application over a wide range of substrates including concrete and sand / cement screeds. It can be applied at thicknesses from 5mm to 50mm in one application.

TEKCEM 550 FIBRE is fast setting and can receive a tiled floor finish after 3 hours or most other types of finish at 24 hours (at 20°C).

TEKCEM 550 FIBRE is shrinkage compensated and contains fibre reinforcement providing the perfect smoothing material for most floor finishes.

Technical Data

- **Packaging** – 25 kg Lined paper sacks
- **Water addition** – 5.8 - 6.0 L per 25kg
- **Working Time** - 20 - 30 mins
- **Time to receive floor finishes** – 3 hours (below 5mm)
- **Time to receive resilient floor finishes** – 24 hours (below 5mm)
- **Application Thickness** – Above 3mm when hand applied, Above 5mm when Pump applied – maximum 50mm depth
- **Consumption** - 1.7kg/mm/m²
- **Wet Density** - 2140 - 2170 kg/m³

Compressive Strength - 1 day >15 MPa, 7 days >25 MPa, 28 days >35 MPa

Flexural Strength - 1 day > 4 MPa, 7 days > 5.5 MPa, 28 days >7 MPa

Limitations

Whilst the information provided in this datasheet is true and accurate to the best of our knowledge, it may contain information which is unsuitable under certain circumstances since materials, site conditions and method of application vary with each application.

TEKCEM LTD cannot be held responsible for any loss or damage due to incorrect use or from the possibility of variations in working conditions and/or workmanship beyond our control. The user alone is responsible for any consequences deriving from the product.

Benefits

- Can be applied from 3mm to 50mm in one pour
- Single part, no additives required, just add water
- Light foot traffic after 3 hours
- Protein-free
- Shrinkage compensated
- Pumpable
- High durability
- Suitable for underfloor heating.

Application Options

The Tekcem 550 Fibre can be laid Bonded, Unbonded and Floating.

In bonded applications a suitable primer should be applied depending on the substrate thickness and applied from 3 mm to 50 mm.

In unbonded applications, a minimum of 500 gauge separating membrane should be laid and tape to form a tanked floor. The minimum screed thickness should be 25 mm; this can be reduced with the inclusion of a Tekcem glass fibre mesh to a minimum 20mm thickness.

In Floating applications (standard insulation > 100 kPa) – minimum thickness 25mm on a 500 gauge separating membrane.

In floating applications (routed UFH boards > 300 kPa – minimum 6-10mm when bended using suitable bonding aid (such as Tekgrip).

Minimum cover over UFH Pipework for Standard Tacker clip / castellated panel systems is 15mm above top of pipe

Health and Safety

This product is not classified under the Chemicals Hazard Information and Packaging for Supply Regulations. A Material Safety Data Sheet relating to this product can be obtained from TEKCEM LTD. Please dispose of packaging and waste responsibly.

Storage and Shelf life

12 months in unopened bags and stored under good, cool and dry conditions.

TEKGROUP

Unit 1 Power Park, Commercial Road, Goldthorpe Industrial Estate, Rotherham,
S63 9NBL
T: 01709 261 007
www.thetekgroup.co.uk

www.tekcem.co.uk



TOOLS REQUIRED

- Steel trowel
- Spiked roller
- Mixing bucket, slow speed drill and paddle (small projects)
- Mixer / pump (high volume applications)

Wash all tools thoroughly with water directly after use.

SURFACE PREPARATION

Before starting, all substrates must be clean, dry and strong enough to support the weight of the leveller, adhesive and the final covering being applied. Remove all dust, dirt, laitance, oil, grease and other contaminants that may effect adhesion. Where traces of adhesive remain, these must be strong, sound and well adhered to the surface. Sub-floors directly to earth must have a DPM.

SUBSTRATES

Concrete/screed:

Ensure that new concrete is confirmed dry via consistent moisture readings across the whole surface. Sand/cement screeds must have a surface relative humidity reading of less than 75% RH before work can commence. If it is a new screed, allow 1 day per mm for drying. Remove any laitance from the surface mechanically and remove all dust and debris, ideally by vacuum.

It is necessary to prime sand/cement screeds to aid adhesion, maintain workability and prevent air bubbles rising to the surface. Prime with TEKPRIME diluted 3 parts water to 1 part neat TEKPRIME. Very porous substrates will require more than one coat.

Asphalt/ceramic/quarry/stone tiles:

Make sure surface is clean and free of loose dirt and dust. Prime the surface with TEKPRIME diluted 1 part water to 1 part neat TEKPRIME mixed with a little cement and sand to form a brush on bonding slurry.

Plywood/chipboard/floorboards:

Plywood (12mm minimum) and chipboard (18mm minimum), must be exterior grade and screwed (not nailed) to the substrate at 6 inch / 150mm centres.

Existing tongue and groove boards should also be screwed down to the joists at 6 inch / 150mm centres.

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Ensure there is sufficient ventilation beneath the substrate and that the substrate is strong enough to support the weight of the leveller, adhesive and the final covering being applied. Make sure surface is free of loose dirt and dust. Prime plywood with TEKPRIME diluted 3 parts water to 1 part neat TEKPRIME, Prime chipboard with TEKPRIME diluted 2 parts water to 1 part neat TEKPRIME and prime floorboards and any exposed edges and joints with neat TEKPRIME.

Calcium sulphate screed:

Ensure that the calcium sulphate screed is confirmed dry via consistent moisture readings across the whole surface. Calcium sulphate screeds must have a surface relative humidity reading of less than 75% RH before work can commence. If it is a new screed, allow 1 day per mm for drying for depths up to 40mm and 2 days per mm thereafter.

Remove any laitance from the surface mechanically and remove all dust and debris, ideally by vacuum.

Calcium sulphate screeds must be sealed prior to applying Tekcem 550 Fibre by applying one coat of Tekprime A diluted 3 parts water

to 1 part neat Tekprime A and allow to dry, followed by a second coat of neat Tekprime A.

Underfloor heating:

Warm water UFH system - The system must have been fully commissioned, brought up to the maximum temperature and ideally switched off 48 hours before application. In the absence of other heat sources, the UFH may be set to 'cut back' to achieve an air temperature of 15°C. Any expansion or movement joints must be carried through to the floor covering surface. When used in conjunction with a castellated panel a minimum thickness of 5mm over the castellations must be achieved when ceramic or porcelain tiles are the final floor covering. If the final floor coverings are LVT or carpet a minimum of 10mm over the castellations must be achieved.

Radiant electrical UFH system - TEKCEM 550 FIBRE can also be used over electrical UFH systems where cables are fitted to a sound, strong, mechanically-fixed cement backer board. Apply TEKPRIME diluted at 3 parts clean water to 1 part TEKPRIME and allow to dry fully. TEKCEM 550 FIBRE may also be used where electrical UFH is used over cementitious subfloors. Priming should be as per the substrate. In all cases TEKCEM 550 FIBRE must be applied at a thickness of 5mm above the cables for resilient, textile and timber applications and a minimum of 3mm for application of stone, ceramic or porcelain products.

Asphalt/ceramic/quarry/stone tiles:

Ensure the surface has been allowed 7 days to cure. Power floated concrete can leave a loose top layer and/or laitance once it has cured. Remove the loose top layer and any laitance from the surface mechanically and remove all dust and debris ideally by vacuum. Once all laitance and/or loose material have been removed, prime the surface with TEKPRIME diluted 3 parts water to 1 part neat TEKPRIME.

MIXING BY HAND

Slowly mix 25kg of TEKCEM 550 FIBRE powder to 5.8 litres of water. Add the powder slowly to avoid clumping. Continue to mix until a uniform consistency is achieved. Do not exceed the suggested water addition as this will adversely affect strength, surface finish and will extend drying and overlaying times.

When the desired consistency is obtained allow to stand for 2 mins before remixing prior to application. Ensure that each mix is used within 30 mins of first mixing.

MIXING BY PUMP

Mix in accordance with the pump manufacturer's recommendations. The rate of water addition should be adjusted to give a smooth, cohesive mix with no surface bleed or segregation. Carry out flow checks at regular intervals during pumping.

APPLICATION

Apply by pouring or pumping to the desired thickness and trowel finish to a maximum of 75mm. If greater thickness is required allow to dry between layers of not more than 75mm. TEKCEM 550 FIBRE will begin curing in 1 to 2 hours and should be "walkable" after approximately 3 hours at 20°C. These times may be decreased by higher temperatures or increased if colder.

TEKCEM 550 FIBRE must be suitably dry before overlaying with floor finishes. Typically this will be after 3 hours for tiles or 24 hours for most other floor finishes. It is the responsibility of the floor finishes applicator to ensure that the residual moisture in the material is suitable.

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