

# Tekcem Fibre 550



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

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

## BENEFITS

- Can be applied from 5 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.

## TECHNICAL DATA

Packaging	25kg lined paper sacks
Water addition	4.5 - 5.5L per 25kg unit
Working time	20 - 30 minutes at 20°C
Time to receive tiled floor finishes	3 hours
Time to receive resilient floor finishes	24 hours
Application thickness	5 to 50mm
Consumption of powder per mm	1.7kg/m <sup>2</sup> /mm
Compressive strength	1 day >15MPa
	7 days >25MPa
	28 days >30MPa
Flexural strength	1 day >4MPa
	7 days >6MPa
	28 days >7MPa

## COVERAGE

Applied thickness	Approx. coverage per 25kg unit
5mm	3m <sup>2</sup>
10mm	1.5m <sup>2</sup>
20mm	0.75m <sup>2</sup>
30mm	0.5m <sup>2</sup>
50mm	0.3m <sup>2</sup>

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## 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 affect adhesion. Where traces of adhesive remain, these must be strong, sound and well adhered to the surface. Subfloors 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 joints at 6 inch / 150mm centres.

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 neat Tekprime, Prime chipboard with Tekprime diluted 2 parts water to 1 part neat Tekprime and prime floor boards and any exposed edges and joints with neat Tekprime.

### Calcium sulphate screed:

Ensure 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 Fibre 550 by applying one coat of Tekprime A diluted 3 parts water to 1 part neat Tekprime A and allowed to dry, followed by a second coat of neat Tekprime A.

### Underfloor heating:

The underfloor heating must be commissioned prior to the application of Tekcem Fibre 550.

When applying Tekcem Fibre 550 onto existing underfloor heating the heating must be switched off 1 week prior to application to allow the substrate to cool sufficiently. Once Tekcem Fibre 550 has been applied, allow 1 week before switching the heating on. Start with a low temperature, gradually increasing the temperature (e.g. by 2°C per day) over a 2 week period.

### Power floated concrete:

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 Fibre 550 powder to 5.8 litres of water. Add the powder slowly to avoid clumping. Continue to mix until a uniform consistency is achieved. If a slightly more fluid mix is required more water can be added whilst mixing. Up to 5.8 litres maximum per 25kg nit can be added. Do not exceed 6.0 litres as this will adversely affect strength and surface finish and will extend drying and overlaying times.

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

## MIXING BY PUMP

Mix in accordance with the pump manufactures 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.

## APPLICATIONS

Apply by pouring or pumping the desired thickness and trowel finish to a maximum of 50mm. If greater thickness is required allow to dry between layers of not more than 50mm. Tekcem Fibre 550 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 Fibre 550 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.

## LIMITATIONS

The application of Tekcem Fibre 550 should only be carried out when the floor temperature is 5 - 30°C and the ambient relative humidity is below 75%. These conditions should be maintained during application and drying. Do not use in areas subject to permanent water immersion.

## WARNING


The information provided in this datasheet corresponds to the best of our expert knowledge and experience. Whilst it 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.

## 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

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

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Tekcem Ltd The Screed Development Centre 1-2 Hope Street Rotherham South Yorkshire, S60 1LH	
Cementitious screed material for use internally in buildings	
EN 13813 Class CT-C30-F7	
Reaction to fire	E
Compressive strength	C30
Flexural strength	F7
Release of corrosive substances	CT

**SETTING NEW LEVELS**  
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