

Tekcem Plus



Tekcem Plus cementitious binder provides improved strength gain and drying performance when compared to unmodified traditional screeds.

OVERVIEW

Tekcem Plus is a cement based binder to replace ordinary Portland cement where improved strength and drying performance is required.

Tekcem Plus allows floor coverings such as ceramic tiles and natural stone tiles to be laid within short installation times.

For further improvement of overall performance of Tekcem Plus proprietary construction fibres may be added or can be supplied preblended.

BENEFITS

- Quicker drying enabling earlier application of floor coverings.
- Can be lightly trafficked after 12 hours.
- Provides screeds to ISCR Cat A or B depending on mix design.
- Can be supplied with fibres for greater control of cracking.
- Suitable for all normal screed applications including over underfloor heating.

TECHNICAL DATA

Packaging	20kg lined paper sacks
Appearance	Grey, cementitious powder
Typical Screed Properties	
Fully compacted dry screed density	1900 - 2100kg/m ³
ISCR Soundness to BS8204-1	Cat A or Cat B
Light foot traffic	12 hours
Full traffic	5 days
Drying time ceramic tiles	1 days
Drying time stone tiles	2 days
Drying time resilient finishes	5 days
Drying times are for screeds up to 50mm thick in good drying conditions	

COVERAGE

Coverage per 100kg of Tekcem Plus		
Applied thickness	Approx. coverage at 1:3	Approx. coverage at 1:4
40mm	5.8m ²	7.5m ²
50mm	4.6m ²	6.0m ²
60mm	3.8m ²	5.0m ²
75mm	3.1m ²	4.0m ²

TYPICAL SCREED MIX DESIGN

Screed type	Composition	Approx yield
ISCR Cat A	100kg Tekcem Plus, 360kg screeding sand, (1:3 volume mix)	0.25m ³
ISCR Cat B	100kg Tekcem Plus, 500kg screeding sand, (1:4 volume mix)	0.3m ³

SETTING NEW LEVELS

The Screed Development Centre
Unit 5 The Business Centre, Barlow Drive, Winsford,
Cheshire CW7 2GN

www.tekcem.co.uk

Sales: 03300 555 227
Technical: 03300 553 714

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SCREED SYSTEMS

Tekcem Plus modified screeds can be applied in bonded, unbonded and floating construction configurations. Bonded screeds should be laid at thicknesses of 25-40mm. Bonded screeds should use a suitably applied sealer and slurry bonding coat or specific bonding agent as required. It is possible to install Tekcem Plus modified screeds at thicknesses down to 15mm by careful selection of aggregate and the use of specific bonding agents.

Unbonded screeds should be applied over a suitable damp proof or separating membrane at a minimum thickness of 40mm. Floating screeds should use a suitable membrane to separate the screed from the underlying insulation and should be at a minimum thickness of 75mm or 65mm for domestic applications. Thicknesses can be reduced to 55mm over rigid insulation board.

Cover to underfloor conduits or heating pipes should be a minimum of 25mm.

Partially bonded screeds with no separating membrane or bonding agent used, often result in cracking and should be avoided.

All unbonded and floating screeds are to be reinforced and may be reinforced with proprietary construction fibres, a suitable steel mesh or nylon mesh.

Fibres can be added for greater control of cracking. Alternatively Tekcem Plus can be supplied with preblended fibres (Tekcem Fibre Plus).

TOOLS REQUIRED

- Forced action mixer
- Screed bar
- Plastic float
- Steel float

Wash all tools thoroughly with water directly after use.

SURFACE PREPARATION

Before starting, all substrates must be sound, clean and dry. The substrate surface should be reasonably flat and true as sudden level changes may lead to sudden changes in screed thickness, which can induce cracking.

For bonded screeds, mechanically remove all laitance, dust, dirt, oil, grease and other contaminants that may affect adhesion. Heavily contaminated floors may require special treatment. Sub-floors directly to earth must have a DPM. If there is no DPM present or the surface relative humidity is above 75%RH the application of a combined DPM and bonding agent directly beneath the screed will facilitate the drying of the screed.

SUBSTRATES

Concrete/screed:

The strength of the substrate should be compatible with the stresses associated with application and hardening of the screed. For bonded construction it is preferable that the compressive strength of the substrate is a minimum of 25 MPa. Additionally for bonded screeds, it is necessary to apply a sealer coat and then prime the substrate with a slurry bonding coat or to employ specific bonding agents prior to the application of the screed.

MIXING

Tekcem Plus modified screeds should be mixed in a forced action mixer. Pre-mix suitable fine aggregate and Tekcem Plus. Add water to give the required consistency. Mix thoroughly for 3 mins. Semi-dry consistency is judged as the consistency at which it is possible to make a ball of the material in the hand, which will retain its shape but will not easily yield "free" water when squeezed.

Care should be taken not to overwater the screed as this will increase drying time and lead to surface bleed. Remember to take into account any water content of the aggregate. The mix has a working life of approximately 45 minutes and batch sizes should be adjusted accordingly.

The screening sand should be a good quality 0/8mm (MP) fines category 1 or 0/4mm (MP) fines category 1, fine aggregate to BS EN 13139.

APPLICATION

The applied screed is consolidated and levelled by tamping with a screed bar and rubbing with a plastic float. A smooth finish is achieved by light trowelling with a steel trowel.

The screed should be laid at a maximum depth of 75mm. If greater depths are required, this may be carried out by building up in roughly two equal layers with the surface of the intermediate layer being scratch-keyed before applying the second layer. Each layer is to be compacted separately and applied within 45mins to ensure a monolithic total thickness.

The screed should not be force dried or exposed to severe drying conditions. It is the responsibility of the floor finishes applicator to ensure that the residual moisture in the screed is suitably low prior to any floor finishes being laid.

Underfloor heating:

Underfloor heating can be gradually introduced once the screed is fully cured (min 7 days) and the surface relative humidity has dried to 75%RH or below. Start with a low temperature, gradually increasing the temperature (eg by 2°C per day) over a 2 week period.

LIMITATIONS

The application of Tekcem Plus modified screeds, sealer and slurry bonding coats 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.

Consideration should be given to the isolation of walls and columns or similar and to the forming/cutting of movement or day joints.

Tekcem Plus must be combined with suitable aggregates and water using exactly the same methods as for mixing a normal (unmodified) sand / cement screed mortar.

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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