

TEKCEM ULTRA

A high-performance screed admixture specifically designed to produce high early strengths, low shrinkage and fast drying screeds.



OVERVIEW

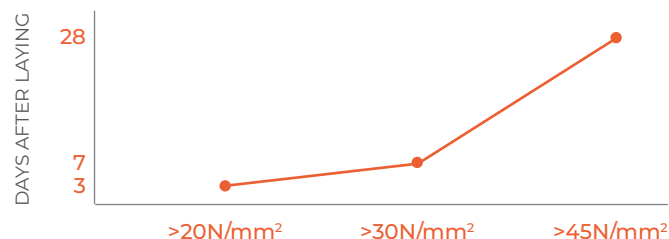
TEKCEM ULTRA is a high-performance screed admixture specifically designed to produce high early strengths, low shrinkage and fast drying screeds.

TEKCEM ULTRA is designed to be installed at lower depths than traditional Sand and cement screeds.

TEKCEM ULTRA has enhanced drying time to facilitate early installation of floor finishes.

BENEFITS

- Early strength development
- Suitable for foot traffic after as little as 24 hours
- Suitable for site traffic after 3 days*
- Increased workability
- Reduced Cracking
- Reduced Curling
- Decreased water addition required.
- Reduced shrinkage characteristics.
- Tiles can be laid after as little as 48 hours** (Based on 50mm depth)
- Provides screeds to ISCR Cat A
- Suitable for all normal screed applications including over underfloor heating
- Supplied in a large 25lt Unit - finished material coverage 10m³ / 21 tonnes per unit
- Easy addition on site
- High compressive strength:



*Subject to site conditions, ambient temperature/humidity and retardation period.

**A confirmation of the residual moisture content of the screed should be undertaken before the application of subsequent floor coverings. Installation of subsequent floor coverings must follow manufacturer's instructions.

TECHNICAL DATA

Additive Appearance	Milky Beige Liquid
Additive pH	5.2 - 6.4
Additive liquid Bulk Density (g/ml)	1.11 +/- 0.025
Additive water solubility	completely soluble

SCREED PROPERTIES

Fresh wet density of screed (kg/m³)	1900-2100
Dry density of screed (kg/m³)	1800-2000
ISCR soundness	CAT A
Light Foot Traffic	12-24 hours
Full Site Traffic	72 hours
Drying time for Tiles	As little as 72 hours
Other Resilient floor Finishes	As little as 4 days

MIX

MIX DESIGN - M3	MIX DESIGN - SCREED PUMP
400kg Cement	62.5kg Cement
1600kg Screeding Sand (0-4mm Screeding Sand)	240kg Screeding Sand (0-4mm Screeding Sand)
2400ml Tekcem Ultra	360ml Tekcem Ultra
55-60 litres Water *	8-10 litres Water *
1kg PP fibres - UFH only	0.15kg PP fibres - UFH only

SURFACE PREPARATION

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 be 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.

SCREED SYSTEMS

TEKCEM ULTRA can be applied in bonded, un-bonded 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 ULTRA screed at thicknesses down to 15mm by careful selection of aggregate and the use of specific epoxy bonding agents (Tekcem SF Membrane) .

Un-bonded screeds should be applied over a suitable damp proof or separating membrane at a minimum thickness of 35mm (40mm for Heavy Duty).

Floating screeds should use a suitable membrane to separate the screed from the underlying insulation and should be at a minimum thickness of 40mm or 35mm for domestic applications. Thicknesses are based on a rigid insulation boarding being installed and with a minimum compressive strength of 100kPa. Insulation must be installed in line with manufacturers recommendations.

Underfloor heating and cover to conduits must be a minimum of 30mm at the highest point of the pipe/conduit. Where UFH pipework is present it is recommended that PP fibres are incorporated into the mix design to assist with the thermal cycling of the screed.

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

TOOLS / EQUIPMENT REQUIRED

- Suitable screed pump
- Screed bar
- Plastic float
- Steel float
- Measuring jug

Wash all tools thoroughly with water directly after use.

LIMITATIONS

The application of TEKCEM ULTRA modified screed, sealer and slurry bonding coats should only be carried out when the floor temperature is 5 to 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 of movement or day joints.

The screed does not require curing – however in areas of that are exposed suitable protection should be used to minimise the risk of excessive drying. Freshly laid screed should be protected from direct sunshine for a [period of 24 hours until initially hardened.

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 (see TEKCEM ULTRA UFH protocol) and the surface relative humidity has dried to 75% RH or below.

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 can induce cracks.

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.

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. 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.

TEKCEM ULTRA modified screed should be mixed in a suitable screed pump. Pre-mix suitable fine aggregate and OPC. Add water containing the TEKCEM ULTRA additive to give the required consistency. Mix thoroughly for 1-2 mins. Do not over water as this will lessen the strength of the screed and extend the screed drying time.

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. Remember to take into account any water content of the aggregate.

The mix has a working life of approximately 45 to 60 minutes and bay sizes should be adjusted accordingly. The screeding sand should be a good quality 0/4mm (MP) fines category 1, fine aggregate to BS EN 13139. OPC to strength class 42,5 BS EN 197-1.

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 thicker apply in two equal layers – this is to ensure compaction for the full depth of the screed. Each layer is to be compacted separately and applied within 45mins to ensure a monolithic total thickness.

STORAGE & SHELF LIFE

The product will have a shelf life of 12 months from production in unopened plastic containers and stored under frost-free, cool and dry conditions. If materials are sat for a prolonged period it is recommended to shake the material to ensure a consistent make is achieved.

HEALTH & 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.

- Avoid contact with skin and eyes
- Protective goggles and gloves should be always worn
- The product is not classified according to the CLP regulation
- Please dispose of packaging and waste responsibly