

# TEKCEM 007

A pre-blended mixture of sand, cement and admixtures producing a high quality screed with improved properties. Improves the drying time and strength gain performance of traditional screeds.



## OVERVIEW

TEKCEM 007 is a liquid admixture used to increase the strength and greatly improve the drying time of traditional sand and cement site batched screeds.

TEKCEM 007 can be used where the screed is to be bonded to the substrate, unbonded or floating.

TEKCEM 007 is ideal for high traffic areas, such as shopping centres, hospitals and airports where improved strength is required.

Ideal for use with proprietary underfloor heating systems.

## TECHNICAL DATA

Packaging	10kg plastic container
Appearance	Amber liquid
Dosage	1.5% by weight of OPC
Typical screed properties	
Fully compacted dry screed density	1900 - 2100kg/m <sup>3</sup>
ISCR Soundness to BS8204-1	Cat A or Cat B
Light foot traffic	24 hours
Full traffic	7 days
Drying time	7 days per 25mm under good drying conditions following membrane removal

## TYPICAL SCREED MIX DESIGN

Screed type	Composition	Approx. yield
ISCR Cat A	100kg OPC, 1.5kg TEKCEM 007, 360kg screeding sand, (1:3 volume mix)	0.25m <sup>3</sup>
ISCR Cat B	100kg OPC, 1.5kg TEKCEM 007, 500kg screeding sand, (1:4 volume mix)	0.30m <sup>3</sup>

## TEKGROUP

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## BENEFITS

- Quicker drying enabling earlier application of floor coverings
- Can be lightly trafficked after 12-24 hours
- Provides screeds to ISCR Cat A or B depending on mix design
- Suitable for all normal screed applications including over underfloor heating
- Easy to handle container
- Simple addition on site

## COVERAGE

COVERAGE PER 100KG OF OPC / 1.5KG TEKCEM 007		
Applied thickness	Approx. coverage at 1:3	Approx. coverage at 1:4
40mm	5.8m <sup>2</sup>	7.5m <sup>2</sup>
50mm	4.6m <sup>2</sup>	6.0m <sup>2</sup>
60mm	3.8m <sup>2</sup>	5.0m <sup>2</sup>
75mm	3.1m <sup>2</sup>	4.0m <sup>2</sup>

## WARNING

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.

## SCREED SYSTEMS

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TEKCEM 007 modified screeds (sand cement screeds with TEKCEM 007 added) 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 007 modified screeds at thicknesses down to 15mm by careful selection of aggregate and the use of specific bonding agents.

Un-bonded screeds should be applied over a suitable damp proof or separating membrane at a minimum thickness of 40mm (60mm for heavy traffic / 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 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 un-bonded and floating screeds are to be reinforced and may be reinforced with proprietary construction fibres, a suitable steel mesh or nylon mesh.

## TOOLS REQUIRED

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

**Wash all tools thoroughly with water directly after use.**

## SURFACE PREPARATION

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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%, the application of a combined DPM and bonding agent directly beneath the screed will facilitate the drying of the screed.

## SUBSTRATES

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### 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

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TEKCEM 007 modified screeds should be mixed in a suitable screed pump. Pre-mix suitable fine aggregate, TEKCEM 007 and OPC. 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 over water 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 screeding sand should be a good quality 0/8mm (MP) fines category 1 or 0/4mm (MP) fines category 1, fine aggregate to BS EN 12139. OPC to strength class 42, 5 or above, BS EN 197-1.

## APPLICATION

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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 be cured, ideally under polythene, as soon as practicable after application, for a minimum of 7 days, after which drying should be allowed to occur naturally. 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:** 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 (e.g. by 2°C per day) over a 2 week period.

## LIMITATIONS

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The application of TEKCEM 007 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 of movement or day joints.

## HEALTH & SAFETY

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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 & SHELF LIFE

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Twelve months in unopened tubs and stored under frost-free, cool and dry conditions.