

# KingFloor® C50T

**Self-smoothing floor leveling topping and underlayment system.**

## DESCRIPTION

KingFloor C50T is a self-smoothing, dimensionally stable and fast setting cementitious floor leveling topping and underlayment system. KingFloor C50T is supplied as a pre-blended dry powder designed for application between 1 mm to 15 mm application.

## APPLICATIONS

KingFloor C50T is designed as a self-smoothing suitable for use as a cementitious light duty floor topping and underlayment for many types of floor finishes such as Vinyl sheeting, carpeting, rubber sheet and tiles.

## ADVANTAGES

- 🔧 Single component, requires only addition of water.
- 🔧 Fast setting.
- 🔧 Fast laying, up to 500 m<sup>2</sup> per day.
- 🔧 Excellent adhesion.

## STANDARDS

KingFloor C50T complies with EN 13813, Class CT, C30, F5, AR1.

## METHOD OF USE

### Surface preparation

Concrete and sand/cement screeds must be sound, dry and fully cured (not subject to shrinkage) and any laitance or surface treatments must be removed by mechanical means such as grit blasting. The surface tensile strength of the substrate should be a minimum 1.5 N/mm<sup>2</sup>.

### PRIMING

The application of the primer is to seal the substrate to prevent release of air from the substrate. Application on to sand/cement screeds, concrete, and other porous substrates, first seal the prepared surface by applying one coat of Cemflow Primer diluted with 4 parts potable water and allow to dry.

Prime the sealed surface by applying a further coat of Cemflow Primer diluted with 3 parts potable water and brush well in to the surface. The primer must be allowed to dry before the application of KingFloor C50T.

### KingFloor Primer

For impervious surfaces, apply one coat of KingFloor Primer and whilst still tacky fully blind with Antislip Aggregate #2 or #3 (depending on the final application thickness) at approximately 3 kg/m<sup>2</sup>

## TECHNICAL PROPERTIES

Flow properties using 35 cc flow ring: ISO 554	Initial ≥ 130 mm After 15 min ≥ 120 mm
Working temperature:	10 - 30°C
Workability:	15 - 20 min
Foot traffic:	3 - 4 hr
Compressive strength:* ASTM C109/109M-02	> 6 MPa @ 1 day > 20 MPa @ 7 days > 30 MPa @ 28 days
Flexural strength:* BS 6319, Part 3:1990	> 2 MPa @ 1 day > 5 MPa @ 28 days
Shrinkage (µ/m): ASTM C490-00a	< 500 @ 28 days
Application thickness:	1 – 15 mm
Bond strength to concrete: ASTM C1583	> 1.5 MPa @ 28 days
Reaction to fire: EN 13501-1	A2 <sub>fl</sub> - S1
VOC:	< 10 g/ltr

*\*Note: dry cure for compressive and flexural strengths @ 25°C. W/P = 0.20.*

until the surface is covered and no resin spots remain. Allow to dry fully overnight and remove excess aggregate before applying KingFloor C50T.

For porous substrates, apply one coat of KingFloor Primer and allow to cure. Apply second coat and whilst still tacky fully blind with Anti-slip Aggregate #2 or #3 (depending on the final application thickness) in the manner mentioned above. Allow to dry fully overnight and remove excess aggregate before applying KingFloor C50T.

### KingFloor DPM

For surfaces with RH between 75 and 85%, prime with 1 coat of KingFloor DPM and allow to dry prior to application of KingFloor Primer.

For surfaces with RH greater than 86%, prime with 2 coats of KingFloor DPM and allow the second coat to dry before priming with KingFloor Primer.

After KingFloor DPM has been applied and left to cure, apply KingFloor Primer and whilst it is still tacky fully blind with Anti-slip Aggregate #2 at approximately 3 kg/ m<sup>2</sup>, until the surface is covered and no resin spots remain. Allow to dry fully overnight and remove excess aggregate before applying KingFloor C50T.

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## MIXING

Use a power-whisk fitted in a heavy-duty slow speed electric drill. Mix in the proportion of 25 kg of powder to 4.75 - 5.25 litre of potable water. Total mixing time must not be less than 3 minutes.

Ensure that sufficient labor is available to enable continuous mixing and pouring. Place the KingFloor C50T within 2 minutes of completion of mixing.

## APPLICATIONS

Pour or pump the mixed material onto the prepared surface spread with trowel and allow to level, and allow to attain a smooth finish. The use of a spiked roller will help eliminate entrapped air and smooth out flow lines. Do not over roll. Apply at a thickness between of 1 - 15 mm in one pass only. To reduce the formation of seam lines, freshly mixed KingFloor C50T should be placed within 6 minutes of the previous adjacent batch being poured. Best results are achieved when the pouring and leveling are a continuous process. It is always better to work in manageable sections of approximately 20 m<sup>2</sup>.

Note: If the mixing batch stiffens, it should be discarded, do not remix it with water.

## CURING

Curing is not required in normal conditions, but in harsh climatic conditions like direct sunlight, flow of wind, elevated temperatures, etc; freshly hardened concrete surfaces should be cured with damp Hessian or to be covered with polyethylene sheets.

## COVERAGE

KingFloor C50T: 2.9 m<sup>2</sup> @ 5 mm thickness for 25 kg bag mixed with 5 litre of clean water.

KingFloor Primer when diluted 4 parts potable water to one part primer:

50 m<sup>2</sup>/5 litre.

250 m<sup>2</sup>/25 litre.

when diluted 3 parts potable water to one part primer:

40 m<sup>2</sup>/5 litre.

200 m<sup>2</sup>/25 litre.

## PRECAUTIONS

- ⊠ Don't place when the substrate temperature is below 8°C or when the ambient temperature is 8°C and falling.
- ⊠ Protect from frost.
- ⊠ Don't exceed the recommended water content and only use potable water.
- ⊠ This product is not recommended for external use or situations where water may come into direct contact with the cured material.
- ⊠ Not recommended to work with the product when the substrate and surrounding temperatures > 30°C.
- ⊠ For hot climate conditions (temperature > 30°C), special procedures should be conducted.
- ⊠ The material should not be used on floors where rising damp is valid, unless a suitable primer is used.

## Notes:

- ⊠ Cool water is advised for mixing (temperature around 20°C or low).
- ⊠ Freshly laid KingFloor C50T should be protected from direct sunlight and strong drying winds until the material is hard.
- ⊠ KingFloor C50T should not be used on new concrete lower than 14 days old.

## PACKAGING

KingFloor C50T is available in 25 kg bags. Cemflow Primer is available in 5 and 25 litre pails. KingFloor Primer is available in 5 kg packs. KingFloor DPM is available in 5 kg packs.

## CLEANING

All tools should be cleaned immediately after finishing with water.

## STORAGE

Shelf life is 1 year when stored under cover, out of direct sunlight and protected from extremes of temperature.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult KingKrete's Technical Services Department.



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## HEALTH AND SAFETY

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use. Use in well ventilated areas and avoid inhalation.

## NOTE

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local KingKrete representative.

KingKrete Inc. reserves the right to have the true cause of any difficulty determined by accepted test methods.

## QUALITY AND CARE

All products originating from KingKrete's manufacturing facilities are manufactured under a management system independently certified to conform to the requirements of the quality standard ISO 9001.

\* Properties listed are based on laboratory-controlled tests.

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### STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this KingKrete Inc. publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

### NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by KingKrete Inc. either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not KingKrete Inc. are responsible for carrying out procedures appropriate to a specific application.

