

# KingFloor® C400

## Industrial grade floor topping.

### DESCRIPTION

KingFloor C400 is designed as an industrial grade floor topping for upgrading and renovating new and existing internal floors.

KingFloor C400 is supplied as a pre-blended dry powder designed for application between 5 - 15 mm (in one application) to provide a finished industrial floor.

### APPLICATIONS

Suitable for use in a wide range of industrial environments subjected to medium to heavy traffic such as:

- 🏠 Warehouses.
- 🏠 Food processing plants.

### ADVANTAGES

- 🏠 Self-smoothing.
- 🏠 Dimensionally stable.
- 🏠 Fast drying.
- 🏠 Can be pumped to cover an area of 2000 m<sup>2</sup> per day. Alternatively a coverage of 600 m<sup>2</sup> per day can be achieved when hand applied, depending on manpower and equipment used.

### METHOD OF USE

#### Substrate preparation

Concrete substrates should be fully cured and achieve a minimum compressive strength of 25 N/mm<sup>2</sup> and a minimum pull-off strength of 1.5 N/mm<sup>2</sup>. The concrete substrate should be below 75% RH and have less than 4% moisture content. Alternatively, KingFloor DPM should be applied according to the priming section.

#### Surface preparation

Concrete surfaces must be degreased using degreasing products, torching or any other suitable method which assures the surface is free from any oil traces. Surfaces should be sound and with no irregularities as they can affect the finish of the applied product.

Concrete surfaces are to be mechanically prepared to remove laitance and achieve a flat surface, grit blasting or surface profiling equipment are preferred.

### TECHNICAL PROPERTIES

Flow properties using 35cc flow ring: ISO 554	Initial ≥ 130 mm After 15 min ≥ 120 mm
Workability:	15 min @20°C
Vicat setting time:	1.5 hr @20°C
Foot traffic: Light traffic:	24 hr @ 25°C 48 hr @ 25°C
*Compressive strength: ASTM C109/109M-02	> 25 MPa @ 7 days > 35 MPa @ 28 days
*Flexural strength: BS 6319, Part 3 : 1990	>5 MPa @ 7 days >8 MPa @ 28 days
Shrinkage (µ/m): ASTM C490-00a	< 400 @ 28 days
Abrasion resistance: BS 8204, Part 2:1999	Special class
Slip resistance: BS 8204, Part 2: 1999	
Dry	60
Wet	42
Application thickness:	5 - 15 mm
Bond strength to concrete:	>1.5 MPa @ 28 days

*\*Note: dry cure for compressive and flexural strengths @ 25°C. W/P = 0.19.*

Acid etching can be used after consulting with KINGKRETE's Technical Department.

Surface defects such as voids and blowholes should be repaired before application. Consult KINGKRETE's Technical Department for the best repair material.

Surfaces must be free of any dust or loose particles before product application. Use suitable methods like vacuuming or sweeping.

If possible, apply the product on a small test area before actual application to check for any problems with the surface preparation.

### PRIMING

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Priming is done to seal the substrate in order to prevent pin holing caused by the release of air from the substrate. The following priming options are available:

## Cemflow Primer

For application onto sand/cement screeds, concrete and other porous substrates, first seal the prepared surface by applying one coat of Cemflow Primer diluted with 3 parts potable water and allow to dry.

Prime the sealed surface by applying a second coat of Cemflow Primer diluted with 3 parts potable water and brush well into the surface. The primer must be allowed to dry before the application of KingFloor C400.

## KingFloor Primer

For impervious surfaces, apply one coat of KingFloor Primer and whilst still tacky fully blind with Antislip 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 C400.

For porous substrates, apply one coat of KingFloor Primer and allow to cure. Apply second coat and whilst still tacky fully blind with Antislip Aggregate #2 in the manner mentioned above.

## 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 Antislip 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 C400.

## MIXING

**Hand Application:**

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. Pour the water into a suitably sized bucket and gradually add the powder while stirring, until a smooth, lump free consistency is achieved.

## Pump Application:

Mix the powder and water according to the method recommended by the pump manufacturers. In the case of pumps having a continuous water feed adjust the rate of water flow until the mix is a smooth fluid, uniform grey liquid with no surface separation, producing a flow of approximately 160 mm using a 50 cc flow ring.

## APPLICATIONS

Pour or pump the mixed material onto the prepared surface and allow to attain a smooth finish. The use of a spiked roller will help eliminate entrapped air and smooth out flow lines. Apply at a thickness between of 5 - 15 mm in one pass only. It is always better to work in manageable sections of approximately 20m<sup>2</sup>.

## 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 C400: 2.9 m<sup>2</sup> @ 5 mm thickness for 25 kg bag mixed with 5 litre of clean water.

Cemflow Primer when diluted 3 parts potable water to one part primer:

☞ 40 m<sup>2</sup>/5 litre.

☞ 200 m<sup>2</sup>/25 litre.

## PACKAGING

KingFloor C400 is available in 25 kg bags. Cemflow Primer is available in 5 and 25 litre pails.

## CLEANING

Tools and equipment can be cleaned with water immediately after use.

## PRECAUTIONS

☞ Don't place when the substrate temperature is below 5°C or when the ambient temperature is 5°C and falling.

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- 📦 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.
- 📦 For hot climate conditions (temperature > 35°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.

## 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.

## 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.

® = Registered trademark of the KingKrete-Group in many countries.

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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.