

# KingFloor<sup>®</sup> PU100

**Solvent based polyurethane resin floor coating.**

## DESCRIPTION

KingFloor PU100 is a solvent-based, polyurethane floor coating. It is specially designed to provide floorings with excellent abrasion and chemical resistance. It also has an outstanding UV resistant which makes it an ideal solution for outdoor floors.

KingFloor PU100 system offers different finishes for different slip resistance requirements, it can be available in a smooth finish, or can be broadcast with Antislip Aggregate to obtain a slip resistant finish.

## APPLICATIONS

KingFloor PU100 is designed as a floor coating suitable for applications such as:

- 📦 Car park decking and domestic garages.
- 📦 Retail and commercial areas.
- 📦 Store rooms and warehouses.
- 📦 Food processing plants and dairies.
- 📦 Hospitals, pharmaceutical industries and laboratories.
- 📦 Production, maintenance and assembly areas.

## ADVANTAGES

- 📦 Hard-wearing.
- 📦 Excellent UV resistance.
- 📦 Excellent resistance to a variety of chemicals.
- 📦 Easy to clean with a seamless, smooth and semi-glossy finish.
- 📦 Can be available as a smooth coating and as an anti-slip coating using Antislip Aggregate #2 or #3 to obtain different roughness finishes.

## SYSTEM SPECIFICATION

Two systems are available depending on whether a smooth or an anti-slip finish is required:

### To obtain a smooth finish

- 📦 KingFloor Primer/S (1 coat).
- 📦 KingFloor PU100 (1 - 2 coats).

### To obtain an anti-slip finish

- 📦 1st coat KingFloor Primer/S.
- 📦 2nd coat KingFloor Primer/S to be broadcast with Antislip Aggregate #2 or #3 while it is still wet.
- 📦 KingFloor PU100 (1 - 2 coats).

## 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, consult with KINGKRETE's Technical Department.

### 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. 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.

Application

## TO OBTAIN A SMOOTH FINISH

### KingFloor Primer/S

Priming should be done using KingFloor Primer/S.

### Mixing

Prior to mixing, stir individual components of KingFloor Primer/S.

Taking care to ensure that the bottom and sides are thoroughly scraped, transfer the entire contents of the hardener container into the base container and mix for 2 - 3 minutes using slow speed drill fitted with a suitable paddle.

*Note:* Never mix KingFloor Primer/S by hand as this could lead to areas of uncured material.

# KingFloor® PU100

Technical Properties	KingFloor Primer S	KingFloor Primer	KingFloor PU100
Colour:	Clear	Clear	Variable
Pot life:	120 - 180 min	90 - 120 min	4 - 6 hr
Mixed density:	1.00 ± 0.05 g/cm <sup>3</sup>	1.10 ± 0.05 g/cm <sup>3</sup>	1.30 ± 0.1 g/cm <sup>3</sup>
Minimum overcoating time:	12 hr	12 hr	12 hr
Maximum overcoating time:	24 hr	24 hr	24 hr
Full cure:	7 days	7 days	7 days
Volume solids:	87 ± 5 %	100%	55 ± 5%
Bond strength on C25/30 concrete: ASTM D4541	≥ 2 MPa @ 7 days (Substrate failure)	≥ 2 MPa @ 7 days (Substrate failure)	≥ 2 MPa @ 7 days (Substrate failure)
Tensile strength: ASTM D412	N/A	N/A	≥ 4 MPa @ 7 days
Shore D hardness: ASTM D2240	N/A	N/A	≥ 50
Taber abrasion (1000 g, 1000 cycles) ASTM D4060 CS17 wheel	N/A	N/A	≤ 75 milligram
Application temperature range:	Do not apply if the ambient or floor temperature below 8°C or anticipated to fall below 8°C during the first 24 hours of application		

## APPLICATION

Apply 1 coat of KingFloor Primer/S at 0.20 kg/m<sup>2</sup>/coat. Apply the primer using lamb's wool roller and work it well into the substrate. KingFloor Primer/S may be over-coated as soon as it becomes tack free.

If over-coating of the KingFloor Primer/S exceeds 24 hours, light scarification of the surface should be undertaken before the application of KingFloor PU100.

## KINGFLOOR PU100

KingFloor PU100 is applied is the topcoat of the system.

## Mixing

Prior to mixing, stir individual components of KingFloor

P. Taking care to ensure that the bottom and sides are thoroughly scraped, transfer the entire contents of the hardener container into the base container and mix for 3 minutes using a slow speed drill fitted with a suitable paddle.

## APPLICATION

KingFloor PU100 can be applied by brush, roller or airless spray machine at a coverage of 0.15 - 0.20 kg/m<sup>2</sup>/coat.

The first coat should be applied to obtain a continuous uniform coating. The second coat (if needed) should be applied within 24 hours to achieve the maximum adhesion between the two coats.

## TO OBTAIN AN ANTI-SLIP FINISH

### KingFloor Primer/S broadcast with Antislip Aggregate

KingFloor Primer/S should be mixed following the same procedure mentioned above, apply the first coat of KingFloor Primer/S at a rate of 0.20 kg/m<sup>2</sup> using lamb's wool roller and leave it for 12 - 24 hours.

Apply a second coat of KingFloor Primer/S at the same coverage rate stated above, and while it is still wet it should be broadcasted with Antislip Aggregate #2 or #3 at a rate of 2 - 4 kg/m<sup>2</sup> and allow to dry for 24 hours. All excess aggregate should be thoroughly removed before applying the top coat.

### KingFloor PU100

KingFloor PU100 is applied as the top coat of the system.

# KingFloor® PU100

## APPLICATION

KingFloor PU100 should be mixed following the same procedure mentioned above. KingFloor PU100 can be applied by brush, roller or airless spray machine at a coverage of 0.15 - 0.25 kg/m<sup>2</sup> per coat.

The first coat should be applied to obtain a continuous uniform coating. The second coat (if needed) should be applied within 24 hours to achieve the maximum adhesion between the two coats.

## PACKAGING

KingFloor Primer/S is available in 5 and 20 kg packs. KingFloor PU100 is available in 5 kg and 18 kg packs.

Antislip Aggregate is available in 25 kg bags.

## COVERAGE

### For a smooth finish:

KingFloor Primer/S: 0.20 kg/m<sup>2</sup> per coat.

KingFloor PU100: 0.15 - 0.20 kg/m<sup>2</sup> per coat.

Approximate system thickness: 0.2 - 0.3 mm.

### For an anti-slip finish:

1st coat KingFloor Primer/S: 0.20 kg/m<sup>2</sup> per coat.

2nd coat KingFloor Primer/S: 0.20 kg/m<sup>2</sup> per coat.

Antislip Aggregate #2: 2 - 4 kg/ m<sup>2</sup>.

KingFloor PU100: 0.15 - 0.25 kg/m<sup>2</sup> per coat.

Approximate system thickness: 1.0 - 1.2 mm.

*Note:* For exposed and high trafficable areas, another coat of KingFloor PU100 is recommended to be applied for more durable performance.

## 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 Qatar facility 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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## KingKrete-Qatar/KingFloor\_PU100\_02/v2/07\_18

### 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.