

KingFloor® UN100

Epoxy primer, levelling mortar, intermediate layer, repair-mortar, and floor screed.

DESCRIPTION

KingFloor UN100 is a two component multi-use epoxy resin. It can be used as a primer, in addition, it can be mixed with different filler gradations to be used as a levelling mortar, self-levelling intermediate layer, repair mortar or floor screed.

APPLICATIONS

- 🔧 Primer: over concrete and cementitious floors and epoxy mortars.
- 🔧 Repair mortar: as a patching or a levelling mortar.
- 🔧 Flooring underlayment: as a self-levelling intermediate layer or a floor screed.
- 🔧 KingFloor UN100 can be over-coated with KingFloor UN100 UN201 decorative and protective epoxy flooring systems.

ADVANTAGES

- 🔧 Good penetration.
- 🔧 Excellent adhesion.
- 🔧 Can be used for multiple applications.
- 🔧 Highly durable.
- 🔧 KingFloor UN100 screed system can be used in freezer rooms for temperatures down to -25°C.

SYSTEM COMPONENTS

A) For use as a primer:

Primecoat: 1 - 2 coats of KingFloor UN100

B) For use as a low thickness levelling mortar (surface roughness < 1 mm)

Primecoat: 1 - 2 coats of KingFloor UN100

Levelling mortar: 1 coat of KingFloor UN100 + quartz sand (0.1 - 0.3 mm) + Don Extender

C) For use as a medium thickness levelling mortar (surface roughness up to 2 mm)

Primecoat: 1 - 2 coats of KingFloor UN100

Levelling mortar: 1 coat of KingFloor UN100 + quartz sand (0.1 - 0.3 mm) + Don Extender

D) For use as a self-levelling intermediate layer (1.5 to 3 mm)

Primecoat: 1 - 2 coats of KingFloor UN100

Levelling mortar: 1 coat of KingFloor UN100 + quartz sand (0.1 - 0.3 mm)

Optional: Antislip Aggregate #2 or #3, and seal with KingFloor UN200UN201 smooth roller coating.

TECHNICAL PROPERTIES @ 25°C:

Mixed density: (neat resin)	1.5 ± 0.1 g/cm ³
Solid content:	100%
Foot traffic:	After 24 hr
Full cure:	7 days
Compressive strength: BS 6319-2	≥ 55 MPa @ 7 days Screed (filled 1:8)
Flexural strength: EN 13892-2	≥ 20 MPa @ 7 days Screed (filled 1:8)
Tensile strength: BS 6319-7	≥ 10 MPa @ 7 days Screed (filled 1:8)
Bond strength on C25/30 concrete: EN 1542	≥ 2.5 MPa (substrate failure)
Shore D hardness: ASTM D2240	≥ 80
Impact resistance: ISO 6272-2	Pass @ 10 N.m (no cracks or peel)
VOC: ASTM D2369	< 50 g/ltr

E) For use as a floor screed (15 - 20 mm thickness) or repair mortar

Primecoat: 1 - 2 coats of KingFloor UN100

Bondingkey: 1 coat of KingFloor UN100

Screed: 1 coat of KingFloor UN100 + suitable sand mixture (to be applied when the bonding key layer is still tacky)

METHOD OF USE

Substrate Preparation

Concrete substrates should be fully cured and achieve a minimum compressive strength of 25 N/mm² and a minimum pull-off strength of 1.5 N/mm².

The concrete substrate should be below 75% RH and have less than 4% moisture content. Alternatively, KingFloor DPM should be used after consulting with KINGKRETE's Technical Department.

KingFloor[®] UN100

COVERAGE				
Component	Mixed resin : Sand : Don Extender mixing ratio	Quartz Sand Gradation	Coverage Rate	Thickness
A) Primer	1 : 0 : 0 (no sand or extender needed)	-	0.38 - 0.60 kg/m ² /coat	250 – 400 microns/coat
B) Low thickness levelling mortar (surface roughness < 1 mm)	1 : 0.5 : 0.005	0.1 - 0.3 mm	1.8 kg/m ² /mm	Depending on substrate surface roughness
C) Medium thickness leveling mortar (surface roughness up to 2 mm)	1 : 1 : 0.005	0.1 - 0.3 mm	1.95 kg/m ² /mm	Depending on substrate surface roughness
D) Self levelling intermediate layer	1 : 1 : 0 (no extender needed) Optional: for an anti-slip finish, broadcast Antislip Aggregate #2 or #3 and seal with KingFloor UN200UN201 smooth roller coating	0.1 - 0.3 mm	1.95 kg/m ² /mm and 4 kg/m ² for Antislip Aggregate #2 or #3	Smooth finish: 2 mm Anti-slip finish: depending on Antislip Aggregate used
E.1) Bonding key	1 : 0 : 0 (no sand or extender needed)	-	0.40 - 0.64 kg/m ²	265 - 425 microns
E.2) Screed/repair mortar	1 : 8 : 0 (no extender needed)	Suitable sand gradation* (as note below)	2.0 kg/m ² /mm	15 - 20 mm

* Note: the following is a recommended quartz sand gradation for layer thickness of 15 - 20 mm: 20 parts by weight (pbw) quartz sand 0.1 - 0.3 mm
30 parts by weight (pbw) quartz sand 0.1 - 0.7 mm 50 parts by weight (pbw) quartz sand 0.5 - 1.0 mm

Note : the maximum grain size shall not exceed 1/3 of the floor screed thickness, grain shape should be taken into consideration when selecting the best suitable quartz sand gradation.

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.

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.



KingFloor® UN100

MIXING

Base: Hardener mixing ratio = 86 : 14 (by weight)

Prior to mixing, stir individual components of KingFloor UN100. Add the KingFloor UN100 hardener to the base and using a jiffy-type mixer attached to a slow running electric drill, mix for approximately 2 minutes. Once the KingFloor UN100 hardener and base have been mixed, transfer the entire contents into a Casco or Creteangle-type mixer, taking care to ensure that the bottom and sides are thoroughly scraped. Start the mixer and transfer to it the entire contents of the KingFloor UN100 quartz sand and Don Extender if necessary, taking care to ensure that these are completely dry and lump-free. Continue mixing for approximately 2 minutes.

Note: Never mix KingFloor UN100 by hand as this could lead to areas of uncured material.

APPLICATION

A) Primer

KingFloor UN100 can be applied using a brush, roller or squeegee to obtain a continuous primer coat. If needed, apply an additional coat of KingFloor UN100, and allow to dry before the primer is covered with other flooring systems.

B & C) Leveling mortar

Apply KingFloor UN100 onto the primed surface as a levelling mortar using a squeegee or a trowel to the required thicknesses.

D) Self-leveling intermediate layer

Pour the mixed material onto the primed surface and spread using a trowel or rake at the required thickness and allow to attain a smooth finish.

While still wet, thoroughly spike roll KingFloor UN100 to help eliminate the entrapped air. If an anti-slip finish is required, while the self-levelling mortar is still wet, broadcast with Anti-slip Aggregate #2 or #3 to excess and wait until it gets dry, then remove excess aggregate.

Seal the system with KingFloor UN200 smooth roller coating. The coating can be applied using a roller or brush at the required thickness.

E) Floor screed/ repair mortar

Apply KingFloor UN100 bonding key onto the primed surface using a brush, roller or squeegee.

While the bonding key is still tacky, apply KingFloor UN100 evenly using a trowel at the required thicknesses. The material should be tamped well in place and finished with a steel trowel to achieve the required smoothness.

CLEANING

KingFloor UN100 can be removed by KINGKRETE solvent prior setting.

PACKAGING

Option 1

Base: 25.7 kg.

Hardener: 4.3 kg.

Base and hardener: 30 kg.

Option 2

Base: 220 kg drum.

Hardener: 37 kg drum.

Base and hardener: 1 drum (220 kg) base and 1 drum (37 kg) hardener = 275 kg.

Option 3

Base: 220 kg drum.

Hardener: 110 kg drum.

Base and hardener: 3 drums (220 kg) base and 1 drum (110 kg) hardener = 770 kg.

Contact KINGKRETE for the proper quartz sand packaging details based on the flooring system required.

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.



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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.

