KingFloor ® PU1000T

Heavy duty modified epoxy polyurethane system topping for floor surfaces.

DESCRIPTION

KingFloor PU1000T is a solvent free, modified epoxy polyurethane system based topping that provides floor surfaces with a hygienic and cosmetically attractive finish. KingFloor PU1000T is applied by trowel and can be coved and laid to falls.

KingFloor PU1000T has excellent durability when subjected to pedestrian and vehicular traffic. It also has very good resistance for a wide range of chemicals, commonly found in industrial environments (consult our Technical department for further details).

KingFloor PU1000T finish provides a very good slip resistant floor, and can be supplied in a variety of colours (consult our Sales Department for details).

APPLICATIONS

KingFloor PU1000T is used to provide a hygienic, dense and extremely hard wearing surface for concrete floors for a wide range of applications such as:

- Heavy industry factories.
- Paint workshops.
- Steel works.
- Dairies.
- Chemical factories.
- Oil refineries.

ADVANTAGES

- Hard wearing.
- Solvent free.
- Hygienic and non-tainting.
- Will not support bacterial growth.
- Easy to clean when sealed.
- Thermal shock resistant.
- Resistant to temperatures between -40ºC and 120ºC.
- Able to withstand steam and hot water cleaning.
- Conforms to FDA CFR 21, 175 for food contact.
- Non-slip.
- Available in a wide range of attractive colours.
- Resistant to a wide range of chemicals, consult KINGKRETE technical department for more details.

STANDARDS

KingFloor PU1000T complies with EN 13813, SR-B2.0-AR0.5-IR10.

TECHNICAL PROPERTIES @ 25^{0}C: For KingFloor PU1000T

Density:	1.9 ± 0.1 g/cm^3
Compressive strength: BS 6319-2	≥ 90 MPa @ 7 days
Flexural strength: EN 13892-2	≥ 30 MPa @ 7 days
Tensile strength: BS 6319-7	≥ 15 MPa @ 7 days
Bond strength on C25/30 concrete: ASTM D 4541 EN 13892-8	≥ 2 MPa @ 7 days (concrete failure)
Abrasion resistance: ASTM D4060 (1000 cycle, 1000 g) CS-17	≤ 35 milligram
Maximum wear depth: BS EN 13892-4	0.01 mm
Impact resistance: ISO 6272-2	Pass @ 10 N.m
Water absorption:	Nil
Pot life:	30 - 50 min
Foot traffic:	After 24 hr
Vehicular traffic:	After 5 days
Chemical curing:	7 days
VOC: ASTM D2369	< 20 g/ltr (complies with LEED)

Technical Properties @ 25^{0}C: For KingFloor PU1000T Seal	
Density	1.15 ± 0.05 g/cm^3
Pot life:	30 - 50 min
Bond strength to KingFloor PU1000T:	≥ 2 MPa
Maximum wear depth: BS EN 13892-4	0.02 mm over KingFloor PU1000T

Technical Properties @ 25^{0}C: For KingFloor PU1000T Primer	
Density:	1.10 ± 0.05 g/cm^3
Pot life:	80 - 120 min
Over coating time:	12 - 24 hr
VOC: ASTM D2369	≤ 30 g/ltr

TEMPERATURE RESISTANCE AND THICKNESS

KingFloor ® PU1000T

RANGE

A 5 mm thickness of KingFloor PU1000T is able to withstand liquid spillage up to 60°C and cold temperature down to -15°C.

A 9 mm thickness and above of KingFloor PU1000T is able to withstand liquid splillage up to 120°C and cold temperature down to -40°C.

METHOD OF USE

Substrate Preparation

The substrate must be clean, dry, even, dense and free from oil, grease, dust and other contaminants.
A clean surface will ensure maximum adhesion between the substrate and the coating.

Concrete floors must have a minimum compressive strength of 25 N/mm² and a maximum concrete relative humidity of 75% (max. moisture content of 5%), relative humidity can be measured by using hygrometers.

Concrete relative humidity should be less than 75% at 28 days or more. For low w/c ratio concrete floors, 75% hygrometer reading or less can be achieved before 28 day age. For surfaces with RH greater than 75%., prime the substrate with one coat of Strongcoat DPM, allow to cure, then apply one coat of KingFloor PU1000T Primer.
Contact KINGKRETE technical department for further details.

Surface Preparation

Unsound layers and contaminated concrete surfaces must be removed using mechanical surface removing equipment. For areas deeply contaminated by oil or grease, treat with hot compressed air.

Priming

Concrete substrates should be primed with KingFloor PU1000T Primer.

Use lambs wool roller to apply the primer. More than one coat may be required for highly porous or textured surfaces. Work the primer well into the surface of the concrete and whilst the primer is wet, dress the surface with Antislip Aggregates #3 at the rate of 0.5 kg/m² and allow to touch dry.

Another prime coat shall be applied just before applying the mixed KingFloor PU1000T to ensure strong bond between the primed substrate and the topping.

MIXING

KingFloor PU1000T consists of four packs, base component, colour pack, hardener and filler.

Transfer the entire contents of the colour pack into the base container and mix until a uniform colour is obtained. Add the contents of the KingFloor PU1000T Hardener into the base container. Using a jiffy-type mixer attached to a slow running electric drill, mix for approximately two minutes.

Then transfer the entire contents of the base container into a Casco or Creteangle-type mixer, ensuring that the bottom and sides are thoroughly scraped.

Start the mixer and add the entire contents of the KingFloor PU1000T Filler container, ensuring that this is completely dry and lump-free. Continue mixing for approximately two minutes.

Important: Never mix by hand as this could lead to areas of uncured material.

APPLICATION

Once mixing is complete, transfer the KingFloor PU1000T to the primed surface and using a straight-edged steel trowel, apply it evenly.

The use of KINGKRETE Solvent to clean the trowel during application will also aid in producing a tight closed surface.

Important: When applying each kit of KingFloor PU1000T, leave approximately 200 mm of the closest working edge untrowelled as this will help the blending in of the next kit.

Note: Avoid excessive trowelling as this can lead to marks resembling burns on the surface.

To have a smooth finish, the cured trowelled surfaces is sealed (within 48 hours) using KingFloor PU1000T Seal.

REMARKS

KingFloor PU1000T should not be applied at temperatures below 5°C.

Note: KingFloor PU1000T is not colour stable and may discolour on ageing and exposure to UV light, especially with light colours. This will not adversely affect the performance of the product.

CLEANING

KingFloor PU1000T and primer can be removed by

KingFloor ® PU1000T

KINGKRETE solvent prior setting.

PACKAGING

KingFloor PU1000T is available in 30 kg packs.
KingFloor PU1000T Primer is available in 5 kg packs.
KingFloor PU1000T Seal is available in 5 kg packs.

COVERAGE

KingFloor PU1000T: Approximately 3.1 m²/kit @ 5 mm thick. KingFloor PU1000T Primer: 4.5 m²/kg per one layer to provide 200 micron DFT.
KingFloor PU1000T Seal: 4 - 5 m²/ kg per one layer to provide 180- 200 microns DFT.

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.

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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.
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