

KingGrout[®] PG100

High strength fast flow epoxy resin grout.

DESCRIPTION

KingGrout PG100 is a three component, high strength, free fast flowing, epoxy resin grout. KingGrout PG100 is suitable for grouting gaps with thicknesses between 10-40 mm at ambient temperatures between 10 to 40°C.

APPLICATIONS

KingGrout PG100 is ideally designed for use in the following applications:

- ☐ Machine base plates.
- ☐ Heavy crane rails.
- ☐ Pile top waterproofing.
- ☐ Bearing plinths.
- ☐ High speed turbines.
- ☐ Grouting areas where occasional chemical spillage may occur.

ADVANTAGES

- ☐ Resistant to dynamic loading.
- ☐ Non-shrink and low creep characteristics under continuous loading.
- ☐ Exceptionally high compressive, flexural and tensile strengths.
- ☐ Extremely dense.
- ☐ Exceptional bond to concrete and steel surfaces.
- ☐ Good chemical resistance.
- ☐ High early strength development allowing for rapid installation.

STANDARDS

KingGrout PG100 complies with EN 1504, Part 3, Class R4 as concrete structural and non-structural repair material (based on epoxy resin).

METHOD OF USE

Substrate Preparation

The Substrate should be sound, clean and free from contamination. Surface laitance should be removed by scabbling or grit blasting. Steel surfaces should be grit blasted to remove all rust and scale. Concrete surfaces should be dry.

Holes drilled for anchor bolts should be thoroughly cleaned from dust and loose debris using suitable brush or compressed air.

MIXING

To ensure proper mixing, a mechanically powered mixer or drill fitted with suitable paddle should be used.

TECHNICAL PROPERTIES

Property	EN 1504-3, Class R4 requirements	Test results
Compressive strength: EN 12190:1991 ASTM C579	≥ 45 MPa @ 7 days	≥ 90 MPa @ 7 days
Adhesive bond: EN 1542:1999	≥ 2.0 MPa	≥ 4 MPa
Restrained shrinkage: EN 12617-4:2002	≥ 2.0 MPa	≥ 4 MPa
Chloride ion content: EN 1015-17:2000	≤ 0.05%	0%
Capillary absorption: EN 13057:2002	≤ 0.5 kg/m ² . h ^{-0.5}	≤ 3 x 10 ⁻³ kg/m ² . h ^{-0.5}
Flexural strength: ASTM C580	-	≥ 28 MPa
Tensile strength: ASTM C307	-	≥ 12 MPa
Peak exothermic temperature: ASTM D2471	-	47°C @40°C
Working time:	-	100 - 130 min @25°C
VOC: ASTM D2369	-	< 10 g/ltr (complies with LEED)

The entire content of the Hardener pack should be added to the Base pack. Care should be taken to ensure that the bottom and the product sides are thoroughly scraped and used. Mix the two components for 2 minutes. The filler should be gradually added while mixing. Mixing should continue for 3 minutes or until a uniform consistency obtained.

THICKNESSES AND SIZE LIMITATIONS

KingGrout PG100 can be applied in a single layer at thicknesses between 10 - 40 mm. For thicknesses greater than 40 mm, multiple layers can be applied after initial curing of the previous layer.

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PLACING AND FINISHING

Under Base plate:

Enough materials should be available to achieve continuous fill and to complete the work. Pouring of the mixed grout should be started from one side only to avoid air entrapment.

To obtain maximum flow distance, a side shutter feed 100 mm height should be erected and used to build the required head. At 100 mm of head, a flow distance of 500 mm and 1800 mm can be achieved at gap thicknesses of 10 mm to 40 mm respectively @ 25°C ambient temperatures.

Formwork:

As the mixed grout possesses high fluid characteristics, all formwork and shutters should be water tight. This can be achieved by sealing underneath the formwork and at the joints by using an appropriate mastic.

Notes:

- ☞ If application is done under high temperatures, care should be done because the working time will be reduced significantly.
- ☞ To reduce the effect of this problem, try to store the unmixed materials in a cool environment, avoiding the direct sunlight. Also, try not to make the application in the middle of the day or direct sunlight.

CLEANING

All tools should be cleaned immediately after finishing using a suitable epoxy thinner. Hardened materials should be cleaned mechanically.

PACKAGING

KingGrout PG100 is available in 20 kg packs.

YIELD

Approximately 10.25 litre/20 kg pack.

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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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

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