

KingGrout® PG90

High strength pourable epoxy resin grout.

DESCRIPTION

KingGrout PG90 is a three component, high strength, free flowing, epoxy resin grout. KingGrout PG90 is suitable for grouting gaps with thicknesses between 10 – 150 mm at ambient temperatures between 10 - 40°C.

APPLICATIONS

KingGrout PG90 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.

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 helix type paddle should be used. 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.

TECHNICAL PROPERTIES @ 25°C:

Compressive strength: ASTM C579	≥ 95 MPa @ 7 days
Flexural strength: EN 13892-2	≥ 30 MPa @ 7 days
Tensile strength: BS 6319-7	≥ 15 MPa @ 7 days
Mixed density:	2.00 ± 0.05 g/cm ³
Recommended working ambient temperature:	10 - 40°C
Crack formation @ 150 mm, 40°C:	No cracks or bleeding
Peak exothermic temperature: ASTM D2471	50 ± 2°C @ 40°C
Peak exothermic time: ASTM D2471	50 ± 5 min @ 40°C
Water absorption: ASTM C413	≤ 0.1%
Working life:	≈ 2 hr @ 25°C
VOC: ASTM D2369	< 10 g/ltr (complies with LEED)

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.

Notes:

- ☐ Slow speed mixer (i.e. 300 rpm) should be only used.
- ☐ If drill mixer with helix paddle is used, then the rotation of the paddle should be upward mixing to minimize the entrapment of air (i.e. the rotation of the mixer makes the blades move material from the bottom of the bucket to the top).
- ☐ The mixing paddle should be always below the epoxy grout level, it should not be moved up and down to prevent air entraining.

THICKNESSES AND SIZE LIMITATIONS

KingGrout PG90 can be applied in a single layer at thicknesses between 10 - 150 mm. For thicknesses greater than 150 mm:

- ☐ Multiple layers can be applied after initial curing of the previous layer.
- ☐ KingGrout PG200 can be used instead.

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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 1250 mm and 2100 mm can be achieved at gap thicknesses of 40 mm to 75 mm respectively @ 35°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 PG90 is available in 20 kg and 30 kg packs.

YIELD

Approximately 10 litre per 20 kg pack and 15 litre per 30 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 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

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