

# KingGrout® PG50

High strength pourable epoxy resin grout.

## DESCRIPTION

KingGrout PG50 is a three component, high strength, free flowing, epoxy resin grout. KingGrout PG50 is suitable for grouting gaps with thicknesses between 10 - 150 mm at ambient temperatures between 10 - 40°C.

## APPLICATIONS

KingGrout PG50 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 PG50 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.

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.

## TECHNICAL PROPERTIES

Property	EN 1504-3, Class R4 requirements Test results
Compressive strength: EN 12190:1991 ASTM C579	≥ 45 MPa @ 7 days ≥ 45 MPa @ 1 day ≥ 90 MPa @ 2 days ≥ 100 MPa @ 7 days
Adhesive bond: EN 1542:1999	≥ 2.0 MPa 4.2 MPa
Restrained shrinkage: EN 12617-4:2002	≥ 2.0 MPa 4.3 MPa
Chloride ion content: EN 1015-17:2000	≤ 0.05% 0%
Fire rating: EN 13501-1:2009	- Class F, s3, d2
Capillary absorption: EN 13057:2002	≤ 0.5 kg/m <sup>2</sup> . h-0.5 1.15 x 10-3 kg/m <sup>2</sup> .h-0.5
Flexural strength: ASTM C580	- ≥ 28 MPa
Tensile strength: ASTM C307	- ≥ 12 MPa
Peak exothermic temperature: ASTM D2471	- 42°C @35°C 50°C @40°C
Working time:	- 100 - 120 min @25°C 50 - 70 min @35°C
VOC: ASTM D2369	- < 20 g/ltr (complies with LEED)
Minimum thickness: Minimum thickness:	10 mm @ 10°C 150 mm @ 40°C

## MIXING

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

## 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

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achieved by sealing underneath the formwork and at the joints by using an appropriate mastic.

## NOTES:

- ⚠ If application is done under high temperatures (> 35oC), 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 PG50 is available in 20, 30 kg and 100 kg packs.

## THICKNESSES AND SIZE LIMITATIONS

KingGrout PG50 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.
- ⚠ Flo-Grout EP330 can be used instead.

## YIELD

Approximately 10 litre per 20 kg pack, 15 litre per 30 kg pack and 50 litre/100 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 Middle East facility are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001, ISO 14001 and ISO 45001.

\* Properties listed are based on laboratory-controlled tests.

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Ref: KK-04022-MEA-R01 | Issue: 01.2026

## STATEMENT OF RESPONSIBILITY

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## NOTE

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