

KingGrout® RG100

Fast setting, high strength cementitious precision grout.

DESCRIPTION

KingGrout RG100 is a pre-mixed, pre-packed, fast setting high strength cementitious grout. It contains cement, selected additives, well graded and non-reactive aggregate designed to give excellent flow properties, shrinkage compensation, and high compressive strength.

APPLICATIONS

KingGrout RG100 is ideally designed for anchoring of bolts and bars from 20 – 75 mm grouting gap size into concrete and brickwork.

ADVANTAGES

- ☒ Non-shrink grout.
- ☒ Extremely dense and low permeability.
- ☒ High early strength development allowing for rapid installation.
- ☒ Good flow.
- ☒ Easy to apply, single component which requires only addition of water.
- ☒ Chloride free.

DESIGN CONSIDERATION

The ultimate strength of bars anchorage are affected by the following:

- ☒ Strength of the grouting materials.
- ☒ Length of bar embedment (Hole depth).
- ☒ Hole diameter and preparation.
- ☒ Steel/ bar grade and dimension.

METHOD OF USE

Joint Surface Preparation

- ☒ Bars should be clean and rust free.
- ☒ The Substrate should be sound, clean and free from contamination.
- ☒ Holes should be rough sided and dust free.
- ☒ All holes should be pre-soaked with clean water for minimum of 4 hours prior to grouting.

MIXING

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

Depending on the consistency required, 4.5 – 5.5 liters of clean water should be added to clean container. The 25 kg powder is then added slowly to the water while mixing continuously with low speed mixer/drill (400 - 600 rpm). Mixing time should be continued until uniform consistency is obtained.

TECHNICAL PROPERTIES

Appearance:	Lumps free powder
Compressive strength: ASTM C109/109M-02 @ 6 hrs. @ 1 day @ 7 days	@ 25°C ≥ 10 MPa ≥ 30 MPa ≥ 45 MPa @ 35°C ≥ 25 MPa ≥ 50 MPa ≥ 60 MPa
Flexural strength: (drycure) BS6319, Part 3:1998	≥ 10 MPa @ 28 days
Coefficient of thermal expansion:	≤ 0.11 x 10 ⁻⁴ / °C
Application temperature:	> 5°C & < 38°C
Suitable loading time:	> 10 hrs. @ 25°C
Pot life:	25 - 30 mins. @ 25°C 15 - 20 mins. @ 35°C
Initial set:	40 – 50 mins. @ 25°C 20 - 30 mins. @ 35°C
Final set:	60 – 70 mins. @ 25°C 40 - 50 mins. @ 35°C
Colour:	Grey
Fresh wet density:	2.1 ± 0.1 gm/ cm ³

Note: Typical properties @ 5 liters/ 25 kg @ 25°C. Compressive strength @ 6 hours & 1 day are under restraint. Compressive strength @ 7 days is under dry cure @ 25°C.

PLACING

Mixed grout should be placed within 5 - 10 minutes depending on ambient temperature. Mixed grout should be poured continuously into the prepared holes.

The anchor bar is then pressed into the holes to the full hole depth with slight bar agitation to achieve full bar bond. The inserted bar should be left undisturbed inside the hole until the grout is set.

NOTES:

- ☒ At low temperatures (below 5°C), warm water is recommended to achieve the early strength. And the formwork is recommended to be kept longer time.
- ☒ At high temperatures (38°C and above), cold water (less than 20°C) must be used for mixing.

REPAIRINGS

KingGrout RG100 is also used as a fast set grouting and repairing grout. For repairing areas of high thicknesses (> 80 mm), 10 mm aggregates should be used at a weight ratio of (1:1) with the KingGrout RG100. The same W/P is used based on the KingGrout RG100 quantity.

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CURING

Any exposed area which is not to be cut back needs good curing by means of a curing compound or wet hessian. Curing with large amount of water can be done only for small exposed areas. For large exposed areas better to use curing compound.

CLEANING

All tools should be cleaned immediately after application using fresh water. Hardened materials must be cleaned mechanically.

PACKAGING

KingGrout RG100 is available in 25 kg bags.

THICKNESSES AND SIZE LIMITATIONS

KingGrout RG100 can be applied in a single application for anchoring steel bars at annular gabs between 20 – 75 mm.

YIELD

Approximately 13.5 – 14.5 liters/ 25 kg bag depending on consistency.

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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STATEMENT OF RESPONSIBILITY

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NOTE

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