

KingGrout[®] GP80

Non shrink cementitious precision grout.

DESCRIPTION

KingGrout GP80 is a pre-mixed, pre-packed, high early strength, cementitious grout. KingGrout GP80 is compound of cement, selected additives, well graded fillers, and non-reactive aggregates designed to give excellent flow properties, shrinkage compensation, and high compressive strength.

APPLICATIONS

KingGrout GP80 is ideally designed for grouting areas beneath bridge bearing pads, heavy stanchion bases and base plates where high early strength grout is required.

ADVANTAGES

- ☐ Non-shrink grout.
- ☐ Suitable for use in hot areas.
- ☐ Extremely dense and low permeability.
- ☐ High initial and ultimate early strength development allowing for rapid installation.
- ☐ Good flow, can be poured or pumped into variable gap widths down to 10 mm.
- ☐ Easy to apply, single component, requires only addition of water.
- ☐ Chloride free.

STANDARDS

KingGrout GP80 complies with U.S. Corps of Engineers Specifications CRD –C588-79 and CRD – C 621 in term of workability.

METHOD OF USE

Substrate Preparation

The Substrate should be sound, clean and free from contamination. Surface Laitance should be removed by acid etching.

All surfaces should be pre-soaked with clean water for a minimum period 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 litres (Fluid) or 3.75 litres (Flowable) of clean water should be added to a clean container. For KingGrout GP80 (WWA) only 2.40 litres of clean water per 25 kg (mixed) should be added. The 25 kg powder is then added slowly to the water while mixing continuously with low speed mixer/drill (400 - 600 rpm).

TECHNICAL PROPERTIES

Compressive strength: ASTM C109/109M-11	≥ 40 MPa @ 1 day ≥ 85 MPa @ 28 days
Tensile strength: BS 6319, Part 7:1983	> 5 MPa @ 28 days
Flexural strength: BS6319, Part 3:1990	> 14 MPa @ 28 days
Colour:	Grey
Bleeding: ASTM C940	Nil
Initial setting time ASTM C191	7 hr @ 25°C
Final setting time ASTM C191	11 hr @ 25°C
Expansion characteristics: ASTM C827/C827M-10	Up to 2%
Fresh wet density:	≈ 2.0 gm/ cm ³

Note: Typical properties for KingGrout GP80 are obtained @ 3.75 litres/ 25 kg @ 25°C. Compressive strength @ 1 day is under restraint. Compressive strength, Tensile strength and Flexural strength @ 28 days are under wet cure @ 25°C.

Mixing time should be continued for 3 minutes until a uniform consistency is obtained.

PLACING AND FINISHING

Bearing plate:

Enough material 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 between 100 - 250 mm high should be erected and used to build the required head.

Formwork:

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

The unrestrained areas should be kept at a minimum due to the expansion nature of KingGrout GP80.

KingGrout® GP80

CURING

As KingGrout GP80 is a cementitious material, it should be cured in a similar method to concrete. Curing can be conducted using a good concrete curing compound such as KingKure 80W or by using wet hessian sheets covered with polyethylene sheets.

Notes:

- ☐ At low temperatures (below 8°C), warm water is recommended to achieve the early strength. And the formwork is recommended to be kept longer time.
- ☐ At high temperatures (35°C and above), cold water (less than 20°C) must be used for mixing.

CLEANING

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

PACKAGING

KingGrout GP80 is available in 25 kg bags.

THICKNESSES AND SIZE LIMITATIONS

KingGrout GP80 can be applied in a single layer at thickness between 10 – 100 mm. For greater thicknesses, KingGrout GP80 (WWA) should be used. KingGrout GP80 (WWA) contains 8 – 12 mm well graded washed aggregates to minimize exotherm.

YIELD

Approximately 13 – 14 litres/25 kg bag for KingGrout GP80 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 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

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NOTE

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