KingGrout® RE10 Extreme

Two-component, high-strength pure epoxy chemical anchoring resin for heavy loads.

DESCRIPTION

KingGrout RE10 Extreme is a two-component, high-strength pure epoxy chemical anchoring resin system. It is especially recommended for heavy-load applications and for anchoring rebar and studs in solid concrete.

APPLICATIONS

- Rebar anchoring (dowelling) in concrete
- Threaded rod and stud anchoring in concrete
- Horizontal, vertical and overhead applications

ADVANTAGES

- High bond strength with high load resistance
- For use with all grades of threaded rod and rebar
- Solvent-free, odourless resin with no shrinkage
- High durability
- Suitable for deep embedment installations
- Longer working times for large holes
- For use in dry and wet concrete and in flooded holes
- For use in corrosive environments
- Suitable for diamond-drilled holes
- For use at elevated temperatures – temperature ranges I, II and III
- Low shrinkage enables large-diameter installations
- Close edge distances and small spacing
- Manual hole cleaning for anchors up to 20 mm diameter, in holes up to 24 mm, with embedment depths up to 240 mm
- For use with potable water
- F120 fire resistant

* In compliance with ASTM C881/C881M-10 Type I, II, III, V, VI and VII requirements.

WORKING AND CURING TIME

Concrete temperature	Gel – working time	Minimum curing time in dry concrete	Minimum curing time in wet concrete
5°C	120 min	960 min	x2
15°C	60 min	600 min	x2
25°C	20 min	300 min	x2
35°C	12 min	180 min	x2
40°C	9 min	120 min	x2
45°C	6 min	90 min	x2

Full cure: 24 hours. All specifications are based on the supplied mixer.

TECHNICAL PROPERTIES

Compressive strength at 7 days (ASTM D695)	> 55 MPa
Bond strength at 14 days (ASTM C882)	11 MPa*
Water absorption at 24 hours (ASTM D570)	0.1%*
Linear coefficient of shrinkage (ASTM C881)	< 0.005
VOC content	A+ rating

METHOD OF USE

Drilling and hole cleaning

Drill the hole in the substrate to the required embedment depth using an appropriately sized carbide drill bit. Just before setting an anchor, the hole must be free of dust and debris.

Manual cleaning, for anchors up to 20 mm diameter in holes up to 24 mm and embedment depths up to 240 mm: blow out at least 4 times from the back of the hole with the hand pump, using an extension if needed; brush 4 times with the specified steel brush, inserting it to the back of the hole with a twisting motion; then blow out again at least 4 times.

Compressed-air cleaning (all hole diameters and depths): blow out 2 times from the back of the hole over its whole length with oil-free compressed air (minimum 6 bar at 6 m^3/h); brush 2 times with the specified brush; then blow out again at least 2 times.

Installation

Remove the threaded cap from the cartridge and tightly attach the mixing nozzle. Do not modify the mixer, and make sure the mixing element is inside it; use only the supplied mixer. Insert the cartridge into the dispenser gun and discard the first 10 ml of resin.

Inject the adhesive starting at the back of the hole, slowly withdrawing the mixer with each trigger pull. Fill the hole approximately two-thirds full so that the annular gap between the anchor and the concrete is completely filled along the embedment depth. Before use, check that the threaded rod or rebar is dry and free of contaminants.

Install the rod or bar to the required embedment depth within the gel (working) time given in the table above. The anchor can be loaded once the minimum curing time has passed.

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CONSUMPTION

Rebar diameter (mm)	Hole diameter (mm)	Adhesive volume per cm of embedment (ml)
8	10	0.423
10	12	0.509
12	15	0.926
14	16	0.664
16	20	1.530
18	22	1.697
20	25	2.333
22	27	2.472
25	30	2.770
28	35	4.468
32	40	5.727
36	44	6.299
40	50	8.765

Example: a 25 mm rebar with 10 cm embedment needs 2.77 ml/cm × 10 cm = 27.7 ml per anchor, so one 400 ml cartridge sets about 14 anchors.

PACKAGING

KingGrout RE10 Extreme is available in 400 ml cartridges.

STORAGE

Store between +5°C and +25°C out of direct sunlight. Shelf life is 24 months from the date of manufacture.

HEALTH AND SAFETY

As with all chemical products, avoid contact with the eyes, mouth and skin and keep away from foodstuffs. Treat any splashes to the eyes and skin immediately and, if accidentally ingested, seek immediate medical attention. For further information, refer to the Safety Data Sheet.

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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