K-Grout AG

Thixotropic Epoxy Anchoring Grout.

DESCRIPTION

K-Grout AG is a three-component solvent-free thixotropic epoxy anchoring grout. Specially designed for a variety of grouting and anchoring applications where high dynamic loads are anticipated and high early and ultimate strength is required.

USES

- Base plates
- Anchor bolts
- Crane rails
- Machine grouting

ADVANTAGES

- High early strength
- Non-shrink
- Horizontal & Vertical applications
- Resistant to vibrations
- Waterproof
- Resistant to wide range of chemicals

PHYSICAL PROPERTIES*

PROPERTY	TYPICAL RESULTS
Compressive strength	>95 MPa– at 1 days >110 MPa– at 7 days
Flexural Strength	>30 MPa – at 7 days
Tensile strength	>30 MPa
Bond Strength	Greater than cohesive strength of concrete
Effective Bearing area	95% minimum
Creep Property	Not affected at operating temp. not more than 80˚C

*The above properties are average laboratory values

PACKAGING

K-Crete Epoxy FC is available in 2ltr packs.

SHELF LIFE

12 months when stored in factory packed unopened pack, stored in a cool dry and elevated place away from direct sunlight.

APPLICATION PROPERTIES

Pot life	**At 25 ˚C 90minutes At 35 ˚C 60minutes**
Full cure	**7 days**

LOADING CHART*

Embedded Length in mm	Load in kg
150	**6,600**
200	**8,800**
250	**11,000**
300	**13,200**
350	**15,400**

*The above values are typical loads tested at failure at various embedment lengths. Test conducted using 25mm dia deformed bar embedded in 35 MPa unreinforced concrete

INSTALLATION GUIDELINES

Kenal provides detailed method statements on all its products for use in various applications. These must be referred to prior to starting the work. The information below is a summary intended for guidance only.

PREPARATION

All substrates must be structurally sound, loose or unsound substrate should be removed. Surfaces must be entirely free of oil, grease, paint, corrosion deposits, dust, laitance or other surface deposits. New concrete surfaces should be fully cured with a maximum residual relative humidity (RH) of 75%.

For effective grouting, holes should be drilled preferably using rotary percussive equipment or under-reamed to provide a rough side or dove tailed hole to allow for mechanical and chemical bonding. **K-Grout AG** can be used on smooth sided holes from diamond drilling etc.

Damp substrate are permitted, remove any standing water prior to grouting application.

PRIMING

Priming is not normally required, however ensure the substrates must be structurally sound, loose or unsound substrate should be removed. Surfaces must be entirely

free of oil, grease, paint, corrosion deposits, dust, laitance or other surface deposits.

MIXING

K-Grout AG is supplied as a pre-pack three component product, consist of Part A, Part B and Part C. Pour the base component (Part B) into suitable clean mixing container, and while stirring slowly add the hardener (Part A) and mix for 2 minutes.

Once the Part A and Part B have been mixed, add the filler and mix for further 3 minutes. A mechanical mixer such as low speed drill (300-500 rpm) with mixing paddle is recommended.

Ensure mixing instructions are carefully followed and practiced to achieve product performance. Failure to do so can result in lower performance or even possible product failure.

APPLICATION

Vertical applications

Pour the mixed product into the hole allowing it to fill 50% to 60% of the total depth of the hole.

Insert the dowel bar or bolt into the hole, and slowly twist it to the full depth allowing **K-Grout AG** to be displaced. Once the bar is inserted, fill-up the hole with more material, or wipe off any excess material and hold the bar in place temporarily until initial set.

Horizontal applications

For horizontal applications, carefully fill the mixed product into a solid barrel gun, once the barrel is full, screw the end cap back on and apply by squeezing the trigger to discharge the mixed material into the hole.

It is essential that the hole is filled from back to front to between 50% to 60% of the total depth, to ensure no air is entrapped inside. A piece of clean hose pipe can be cut and placed over the nozzle to allow the **K-Grout AG** to be placed easily from the back to the front of the hole.

Insert the dowel bar or bolt into the hole, and slowly twist it to the full depth allowing **K-Grout AG** to be displaced. Once the bar is inserted, fill-up the hole with more material, or wipe off any excess material and hold the bar in place temporarily until initial set.

CURING

Allow **K-Grout AG** to fully cure for 24 hours before exposing to full mechanical, chemical or environmental conditions.

THEORETICAL COVERAGE RATE

Approximate volume (ml) of **K-Grout AG** per 100mm depth of hole

Hole Ø (mm)	Bolt Ø (mm)					
	12	16	20	25	32	40
20	25					
25	50	40	25			
32	80	70	60	40		
38		100	100	75	45	
45			150	130	100	45
50				180	150	90
62					280	225

It is recommended to carry-out trial areas to establish practical consumption at site.

PRECAUTIONS

- Do not part mix or re-temper the mix.
- Ensure the product should not be exposed to extreme temperatures or direct sunlight.
- During hot weather condition, store un-mixed materials in an air-conditioned environment.
- Avoid exposure of un-mixed or mixed materials to direct sun light or heat.
- Keep equipment that will be in contact with the product cool and away from direct sun light.
- Avoid application during the hottest time of the day. Do not apply in rain or wet conditions or at temperature below 5°C.
- Do not expose to running water or dampness or humid atmosphere.
- The product should not be thinned with any type of thinner or solvent under any circumstances.

TECHNICAL SUPPORT

Kenal offers full technical support package to specifiers, contractors and end users as well as technical assistance on site and after sales consultations.

HEALTH & SAFETY

As with all chemical products, caution should always be exercised. Protective clothing, such as gloves and goggles, should be worn. See packaging/MSDS for specific instructions.
Treat any splashes to the skin or eyes with fresh water immediately. Should any of the products be accidentally swallowed, do not induce vomiting, but call for medical assistance immediately.