

# Emcekrete A (Formerly known as NanoGrout A) Non-shrink Additive for Mortars and Grouts

## Description

Emcekrete A is a powder admixture for cementitious grouts and mortars. The plasticising agent allows the use of reduced water cement ration with corresponding strength increase. The expansion compensates the natural settlement and plastic shrinkage.

## Standards

BSEN 934-2

## Advantages

- Controlled rate of expansion ensures full contact between grouted surfaces
- Produces easily injectable grouts
- Reduces bleeding and segregation
- Good strength and adhesion
- Improved cohesion

## Application

### Areas of application

Applications include grouting of post tension cable ducts, mortars, tunnel grouting, sheet pile anchors, rock and soil anchoring, concrete crack injection, etc.

### Surface Preparation

#### Post-Tensioned Cable Duct Grouting:

Ensure that the metal casing duct is leak-proof. Remove entire amount of water filled in the duct during "pre grouting check" by air pressure. Check that air vents & valves are in good working condition.

#### Cavity Grouting:

Roughen all concrete surfaces by wire brushing, grinding or other mechanical means to ensure a good bond. Loose or broken concrete should be removed. The concrete surfaces should be saturated with water at least 3-4 hrs prior to the application of grout. All standing water should be removed prior to the placement of the grout. Leak proof and strong formwork should be in place prior to placement of grout.

### Mixing

The best mixing sequence is normally water/cement/Emcekrete A. The selected water content should be accurately measured into the mixer. Predispose the measured quantity of Emcekrete A with cement, slowly add the premixed cement into the water, mix for 2

### Application

Mixed grout should be placed by continuously pouring it from only one side of the formwork. Place the grout within 20 minutes of mixing to gain full benefit of expansion process. Adopt usual placing or pumping procedure ensuring a continuous operation. Retempering of grout by adding extra water after stiffening is not recommended.

#### For Cable Ducts:

Grouting process should start from one side of the cable duct till homogenous consistency of grout flows from consecutive air vent valves and outlet valves.

### Curing

All exposed surfaces of grout should be cured using wet curing methods. Alternatively, curing compound from JetCure range can be used.

### Note

In case of grouts for post-tension cable ducts, maintain grout temperature at 20 +/-2°C (as per BSEN 445) to ensure better flow and retention properties.

### Limitations

Emcekrete A should not be used with High Alumina Cement or Cement containing Fly Ash. Grout mixes containing Emcekrete A should not be used in unrestrained areas as it may lead to the cracking of grout.

minutes using a slow speed drill paddle. For high volume grouting, high shear vane, professional grout mixture and pumps are recommended.

## Dosages

Normal dosage at 0.25-1.0% by weight of cementitious material.

## Yield

OPC	0-5 mm Sand	Water	Emcekrete A	Approx. Yield
50 kg	Nil	22 litre	250 kg	36 litre
50 kg	50 kg	24 litre	250 kg	57 litre
50 kg	100 kg	26 litre	500 kg	80 litre

## Typical Properties at 25°C

Property	Test Method	Value	
Component	-	Single	
Form	-	Powder	
Colour	-	Beige to light Brown	
Flexural Strength*	BS 6319-3	4 N/mm <sup>2</sup> at 28 Days	
Compressive Strength*	ASTM C109	1 Day	10 N/mm <sup>2</sup>
		7 Days	32 N/mm <sup>2</sup>
		28 Days	45 N/mm <sup>2</sup>
Expansion*	BSEN 934-4	Upto 4% positive expansion	
Chloride Content	BSEN 480-10	Nil to BSEN 934-4	
Setting Time*	ASTM C191-01a	No Significant effect on cement grout	

*\*Indicative properties at 0.42 W/C ratio with Emcekrete A at 0.5% dosage of OPC Type-1 cement as per BSEN 197-1*

>> Non Shrink Grout & Grouting Aid

## General Information

Package Size	20kg
Shelf Life	12 months from date of manufacture when stored under warehouse conditions in original unopened packing. Extreme temperature/humidity may reduce shelf life.
Cleaning	Clean all equipments and tools with water immediately after use.

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**Health and Safety**

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PPE's	Gloves, goggles and suitable mask must be worn.
Precaution	Contact with skin, eyes, etc. must be avoided. If swallowed seek medical attention immediately.
Hazard	Regarded as non-hazardous for transportation.
Disposal	Do not reuse containers. To be disposed off as per local rules and regulations.
Additional Information	Refer MSDS. (Available on request.)

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**Technical Support**

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MC Technical Services are available on request for on site support to assist in the correct use of its products.

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**NOTE:**

*It is the customer's responsibility to satisfy themselves by checking with the company whether information is still current at the time of use. The customer must be satisfied that the product is suitable for the use intended. All products comply with the properties shown on current data sheets. However, MC-Bauchemie does not warrant or guarantee the installation of the products as it does not have any control over installation or end use of the product. All information and particularly the recommendations relating to application and end use are given in good faith. The products are guaranteed against any manufacturing defects and are sold subject to MC- Bauchemie's standard terms and conditions of sale.*