Technical Data Sheet

CEMCRETE GP

General Purpose Non-Shrink Cementitious Grout

Description:

CEMCRETE GP is a general purpose cementitious non–shrink pourable grout. It is a blend of cement, graded aggregates and chemical additives and designed to give high flow properties, shrinkage compensation, frost resistance and high compressive strength. It is ideally used in several applications such as void filling, grouting under base plates, fence posts, precast erection machine base filling, etc. When mixed with water, CEMCRETE GP transforms into a flowable mixture suitable for application in different places to fill the most irregular areas.

CEMCRETE GP has excellent characteristics of adhesion, impermeability and chemical resistance. It has also a thermal expansion coefficient similar to high quality concrete. It can be applied to fill gaps with a size up to 200 mm.

Uses:

CEMCRETE GP is applied as grouting for several applications including:

- Under plates of columns footing in steel structures.
- Under machinery bases grouting.
- Grouting of fixing precast structural elements.
- Anchoring bolts and fence posts fixing.
- Floor patching and void filling.
- Precast elements erection.
- Pile head reprofiling

Advantages:

- Non-shrink.
- No chloride content.
- Does not contain metallic aggregate.
- Free flow and self-compacting.
- Easy to use by trowel or pouring.
- Excellent bond to substrates.
- High early strength.
- Low water cement ratio to ensure minimum permeability and high durability.

Instructions for Use:

Surface Preparation:

The surface must be solid, compact, clean, free from dust, cement laitance, oil, grease, etc. All loose parts of concrete should be removed. A coarse surface profile with aggregate exposed is preferred.

Soak the surface with water prior to start grouting and allow to drain. Concrete surface should be damped (with no free water) in order to avoid possible water absorption at the moment of casting.

Base plate must be clean and free from oil, grease, or any other contaminated material. Formwork should be constructed to be leak proof to avoid any material loss as CEMCRETE GP is a free flowing grout.

Mixing:

CEMCRETE GP must be mixed mechanically with low speed drill mixer 200-300 rpm, fitted with a suitable paddle. To prepare the mortar, pour into a cement mixer or into a container about 3.25 – 3.50 Lt. of clean water (depending on the required consistency), then add 25 Kg. bag of CEMCRETE GP and mix for few minutes till obtaining a homogeneous mixture, free from lumps. Always add the powder to the water when mixing cementitious products.

Application:

The mixed grout should be poured only from one side of the formwork to eliminate the entrapment of air. This can be achieved by pouring the grout across the shortest distance. While pouring, maintain a constant head, preferably of at least 15 cm on the side where the grout has been poured. Allow 10 cm clearance between the side of the form and the base plate of the machine.

Do not add extra water to the mix more than what specified. If the mix starts to harden, do not add more water to remix. In this case do not use the mix and prepare a new one.

CEMCRETE GP

Once the poured product starts to dry, it should be cured in accordance with good concrete curing practice and protected from sun, rain and winds. Curing shall be done with curing compound such as CEMCURE AR, or with a wet Hessian cloth covered with polyethylene sheet.

Standards:

- ASTM C1107M, C109, C827, C580, C928, C1240
- BS 1881, BS 4551 & BS 6319, Part 3

TECHNICAL PROPERTIES	
Appearance	Gray Powder
Wet Density	2.15 ± 0.03 kg/lit
Potlife time @25°C	>30 minutes
Setting Time	Initial: 2 hours Final: 4 hours
Compressive Strength (ASTM C109)	≥ 20 N/mm²@1 day ≥ 55 N/mm²@7 days ≥ 65 N/mm²@28 days
Flexural Strength (ASTM C580)	1.8 N/mm²@1 day ≥ 7.5 N/mm²@7 days ≥ 9.5 N/mm²@28 days
Elastic Module after 28 days (ASTM C580)	25,200 N/mm²
Expansion Characteristics (ASTM 827)	Up to 2% in 24 hours
Chloride Content (ASTM 1202)	NIL

*Values indicated may vary depending on the environment and conditions of the material. Figures given are tested according to standard laboratory conditions.

Packaging:

CEMCRETE GP is supplied in 25 kg high quality recyclable paper bags.

Yield:

CEMCRETE GP bag of 25 kg achieves 13.5 liters of wet grout when mixed with 3.25 - 3.5 liter water.

Storage:

Store in original packing in dry conditions away from direct sunlight and high humidity levels.

Shelf Life:

CEMCRETE GP can be utilized within 12 months of production date if stored in proper conditions in an unopened original packing away from direct sun and in dry conditions.

Cleaning:

Clean tools and equipment with water before material hardens. Hardened material can only be removed mechanically.

Remarks:

- Do not apply where ambient temperatures are below 5°C.
- Variations of temperature may increase or reduce the initial and final setting time of the mortar.
- During the peak temperature of the day in the summer season, working area should be covered, if work is to be executed externally. Use cold water for mixing and keep all tools and mixer in shaded areas

Health and Safety:

- Avoid contact with eyes and skin. Wear suitable protective clothing such as coveralls, goggles, dust mask and gloves. Use barrier cream. Ensure that there is adequate ventilation. Do not breathe vapor or spray mist.

FIRST AID:

Eyes:	In the event of accidental splashes, flush with warm water and seek medical advice.
Skin:	Wash skin thoroughly with soap and water
Inhalation:	Remove to fresh air, keep patient rested
Ingestion:	Do not induce vomiting. Seek immediate medical attention.

For further safety information, please refer to CEMCRETE GP Material Safety Data Sheet.

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P.O. BOX: 29585, Dubai, UAE, Tel: +971 4 333 4140, Fax: +971 4 333 4115
Email: info@matex.ae, www.matex-global.com