

# KEM SUPER GROUT

## Ultra High Strength Non Shrink grout

### Ref. GA-V2-1013

#### Description

It is supplied as a ready to use powder only requiring addition of water at site. It is a blend of cements, graded silica sand, Microsilica and expansive agents. When mixed with recommended quantity of water, it will produce a high fluid ultra high strength non shrink grout. KEM SUPER GROUT is a unique product designed to give positive expansion in the plastic and as well as hardened states, producing a low porosity and high durability grout.

#### Uses

**KEM SUPER GROUT** with dual expansion properties is recommended for use in grouting heavy duty machinery base plates, power generators, pumps, base plates for electrical pylons and oil storage tanks, columns, crane rails, bridge seats, compressors and recommended especially for situation where compressive strengths exceeding 75 N/mm<sup>2</sup> are required. It is suitable for use in marine environments.

#### Advantages

- Positive expansion in plastic and hardened states, ensures good alignment.
- Rapid installation and early operation of plant.
- Good early strength development.
- Ultra high strength.

#### Typical properties

- **Compressive Strengths: ASTM C109** with 50mm cubes cured under restraint at 25° C and water/powder ratio of 0.11 for flowable consistency and 0.10 for mortar consistency.

Age (days)	Compressive strength (N/mm <sup>2</sup> ) at 25°C	
	Flowable	Mortar
1	28	
3	39	
7	62	-
28	80	92

- Wet Density to **BS 1881-2275** kg/m<sup>3</sup> giving a yield of 12.05 litres for 25 kg bag at flowable consistency.

- Flexural Strength at 28 days at 25°C 12 N/mm<sup>2</sup>
- **Setting time:** to **ASTM C 191** at 25°C at flowable consistency in hours.
  - Initial: 3.00
  - Final set: 4.00
- **Youngs Modulus:** 27 kN/mm<sup>2</sup>
- **Expansion characteristics:** An initial expansion of 0.4 – 1% overcomes plastic settlement in the unset material. Expansion in the hardened state compensates for drying shrinkage.
- **Time for expansion:** Initial expansion in the plastic state starts after 15 minutes and is completed by initial set. Expansion in the hardened state is complete after 28 days. Temperature above 25°C may slightly reduce these times.
- **Pressure to restrain plastic expansion:** Approximately 0.004 N/mm<sup>2</sup>.
- **Flow value at 25°C.** For a grout head of 250mm with a gap of 30 mm, it delivers a flow distance of 3 metres.

#### Standards

The applicable standards for conformance and testing are:

- ASTM C - 109
- ASTM C - 1107
- ASTM C - 827 - 78
- BS - 5383 PART - 2
- BS - 1881
- BS - 4550
- BS - 4551

#### Direction for use

**Planning:** Plan surface preparation, formwork, fixing base plate, mixing and placing equipment, manpower and quantity of grout required.

**Surface Preparation:** Remove oil and grease by blasting or scabbling. Clean entire area with oil free compressed air.

**Formwork:** Arrange pouring grout from one side only. Grout head should be sufficient for gap width and plate size. Side form should be to height of plate and up to 50mm from it. End form should be 50 mm from plate. Provide water outlet. Ensure forms are grout and water tight. Soak with water for at least 4 hours immediately before grouting. Release water and blow excess water away.

**Mixing:** Place the required water in the mixer i.e, 2.5 to 2.75 litres for flowable consistency. Add gradually 25 kg bag of grout and stir with slow speed drill not exceeding 500rpm fitted with paddle or better use a mechanical mixer. Do not



use colloidal mixer. Mix for 3 to 5 minutes after all the powder has been added to obtain a lump free grout. Keep for another 2-3 minutes and stir manually for 1 minute before starting the pour.

**Note:** Do not add excess water than those recommend. This will lead to segregation of mixes and reduce compressive strengths.

**Placing:** Pour grout from one side only maintaining hydrostatic head with continuous supply of grout until grout comes part way up end form. Alternatively the grout can be pumped into position.

**Curing:** When grout is set, protect with wet rags and keep moist until form removal. Alternatively or additionally use a curing compound

## Packaging

25 Kg

## Precautions

**Mixing water temperature:** Water temperature must not exceed 25° C. In hot weather ice cold water may be used. Do not add ice. The material temperature shall be controlled by keeping it in shade or temperature controlled rooms.

**Cleaning:** All equipment must be cleaned with water immediately after use. Mixes containing this product must not be emptied into drainage system.

**Protection:** All work to be protected from rain and frost until fully hardened.

**Fire Resistance:** The product is not flammable

## Storage and Shelf life

**Storage:** stored in dry conditions at moderate temperature and humidity.

**Shelf life:** 12 months

## Health & safety

It is non toxic but is mildly alkaline. Gloves should be worn during application. Splashes to the skin or eyes should be removed with clean water. In the event of prolonged irritation,

## Technical Service

Chembond has established itself in various fields on the basis of its dependable technical service. For this purpose, we maintain a well equipped laboratory for research & quality assurance of all products. Our experienced personnel are always on call and would always be available for product demonstrations and product performance monitoring.

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