

# KUT SUPER GROUT

## High Strength High Fluid Grout

GAP-07-1110



### DESCRIPTION

It is supplied as a ready to use powder which is a blend of cements, graded sand, Microsilica and a blend of expansive agents. It requires only the addition of water to produce a high fluid ultra high strength non shrink grout. **KUT SUPER GROUT** is a unique product designed to give positive expansion in the plastic and early hardened states, producing a low porosity high durability material.

### USES

**KUT 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

**Non shrink:** Positive expansion in plastic and in early hardened states.

**Constant quality:** Factory controlled pre-packed material eliminates site batching variations.

**High early strength:** Ensure rapid installation and early operation of plant.

**Iron free:** No metallic iron to cause staining or deterioration due to rust expansion.

**Chloride free:** Good early strength development without the use of chlorides.

**Other features:** Can be blended with clean aggregate 5 mm for use in gap widths higher than 100mm (in base plate situation). For mixing proportions consult **ASPEC** Sales Departments.

### TYPICAL PROPERTIES

- **Compressive Strengths:** ASTM C.109 with 50mm cubes cured under restraint at 25°C and water/powder ratio of 0.10 for flowable consistency and 0.085 for mortar consistency.

Age (days)	Compressive strength (N/mm <sup>2</sup> ) at 25°C	
	Flowable	Mortar
7	60	-
28	81	92

- Wet Density to BS 1881-2300 kg/m<sup>3</sup> giving a yield of 14.10 litres for 30kg 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 3 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.



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## APPLICATIONS

**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 50mm from plate. Provide water outlet. Ensure forms are grout and water tight. Soak with water for atleast 4 hours immediately before grouting. Release water and blow excess water away.

**Mixing:** Place the required water in the mixer i.e., 3.1 to 3.20 litres for flowable consistency. Add gradually 30kg 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.

**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 such as **KUT CURE WB CLEAR** or **KUT CURE - P**.

## PACKAGING

**KUT SUPER GROUT** is available in 30 kg bags.

## PRECAUTIONS

**Mixing water temperature:** Water temperature must not exceed 15°C.

**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.

**Storage:** Shelf life is 12 months when stored in dry conditions at moderate temperature and humidity

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

## PERFORMANCE STANDARDS

The applicable standards for conformance and testing are:

**ASTM C - 109**

**ASTM C - 1107 Grade C.**

**ASTM C - 827**

**CRDC C - 81**

**BS - 5383 PART - 2**

**CRDC C - 621**

**BS - 1881**

**BS - 4550**

**BS - 4551**

## HEALTH AND SAFETY

**KUT SUPER GROUT** 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, seek medical advice.

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