

# KUT FLOW GROUT

## High Fluid Grout

GAP-01-1110



### 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 - high strength non shrink grout.

**KUT FLOW 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 FLOW 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. 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 included as this causes 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 or 10mm for use in gap widths higher than 150 mm (in base plate situation). For mixing proportions consult Specialities Sales Department.

### TYPICAL PROPERTIES

**Compressive strengths: ASTM C-109** with 50mm cubes cured under restraint at 25°C and water/powder ratio of 0.10 for trowellable consistency 0.13 for flowable consistency and 0.15 for fluid consistency.

Age (days)	Compressive strength (N/mm <sup>2</sup> ) at 25° C		
	Trowellable	Flowable	Fluid
1	27	24	16
7	56	52	38
28	80	63	50

**Wet Density:** to BS 1881-2250 kg/m<sup>3</sup> giving a yield of 12.5 litres for 25 kg bag at flowable consistency.

**Flexural strength:** at 28 days at 25°C 10 N/mm<sup>2</sup>

**Setting time:** According to ASTM C191 at 25°C at flowable consistency

**Initial set:** 4 hours - 0 minute

**Final set :** 5 hours - 55 minutes

**Youngs Modulus:** 27 kN/mm<sup>2</sup>

**Coefficient of Thermal Expansion:** 10 x 10<sup>-6</sup>/C

**Expansion characteristics:** An initial expansion of 1 to 2% when measured according to ASTM C 827 overcomes plastic settlement in the inset material. Expansion in the hardened state when measured according to ASTM C 1090 complying with ASTM C 1107 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. Temperatures 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 250 mm with a gap of 30 mm, it delivers a flow distance of 3 metres.



مصنع الخصوصية لكيماويات البناء  
SPECIALITIES CONSTRUCTION CHEMICALS FACTORY

Marketed by: Alghanim Specialities Co. W.L.L.  
Amghara Industrial Area, P.O.Box: 23595 Safat, 13096 Kuwait  
Tel: 1802550 – 400 - Fax: +965 24582548 - Email: sales@spec-kw.com



## 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. Clear 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 at least 4 hrs immediately before grouting. Release water and blow excess water away.

**Mixing:** Place required water in the mixer: 3 to 3.3 litres for flowable and 3.7 to 4 litres for fluid consistency. Add gradually 25kg bag of grout and stir with slow speed drill not exceeding 500 RPM 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.

**Placing:** Pour grout from one side only maintaining hydrostatic head with continuous supply of grout until grout comes part way up from 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.

## PACKAGING

**KUT FLOW GROUT** is available in 25 kg bags.

## PRECAUTIONS

**Mixing water temperature:** Water temperature must not exceed 35° 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 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 - 1107 Grade C**

**ASTM C - 827**

**CRDC C - 81**

**BS - 5383 Part - 2**

**CRDC C - 621**

**BS - 1881**

**BS - 4550**

**BS - 4551**

**ASTM C-109**

## HEALTH AND SAFETY

**KUT FLOW 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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