QUICK SET

High Early Strength, Non- shrink Class C Cementitious

DESCRIPTION

Quick Set Grout is a Class C high quality, free flowing non shrink, expanding, high early strength development and high ultimate strength gain cementitious grout.

RECOMMENDED USES

- Cementitious grouting where high early strength is required
- Heavy duty support grout beneath high load machine base plates
- Precision grouting application
- Anchoring bolt holes
- Bridge bearing pads
- Crane rail plates
- Balustrading installation, anchor bolts
- Cavities, gaps and recesses
- Rapid reinstate of equipment, minimizes downtime
- Grouting requiring dynamic load bearing and applications subject to continuous vibration
- Stanchions, columns, post installation

FEATURES AND BENEFITS

- High early strength even at low temperatures
- Dual expansion compensates for shrinkage
- in the plastic and hardened state
- High ultimate (28 day) strength
- Exceptional flow characteristics
- Rapid strength gain and set times
- Variable consistency obtainable
- Equipment and machinery can be reinstated after 2 hours
- Non-metallic eliminates staining
- Good impact and thermal resistance
- Pre-bagged material overcomes potential for site batching variation
- Quick setting 15 to 20 minutes
- Hardens in 1 hour
- Australian made

APPLICATION INSTRUCTIONS

Surface and Substrate Preparation-

The substrate to be grouted must be clean, sound and free from dust, oil, grease, curing compounds or any foreign matter that will affect the grout adhesion bond. Bolt holes and anchor points must be clean and free of water.

Pre-Soaking-

All prepared areas must be saturated with water for a minimum of 4 hours prior to grouting. This will reduce the porosity of the substrate.
Prior to grouting, ensure all excess water is removed and all holes must be free from water and no puddles of water are present.
If grouting under base plates, it is imperative that bleed holes or venting holes are provided (this will eliminate pressure build up in a confined area).

Formwork-

It is essential that the formwork to be constructed is leak proof and water tight. In order to achieve this it is recommended that foam rubber strips or a suitable sealant such as polyurethane or silicone be used underneath the formwork.
The formwork should be constructed, which will allow and ensure a grout head is maintained on the side above the level of the underside at the base plate.

The formwork should allow for gravity flow of grout with a suitable grout head allowing for continuous flow between the base plate and the concrete substrate.

To ensure ease of formwork removal, the formwork should be coated with form oil or release oil prior to grouting.

Large Volume Grouting-

For grouting requiring thicknesses greater than 150mm, special procedures are necessary, such as the addition of Fillers.

Temperature-

Low Temperature Application:

At low temperatures below 10˚C, the grout setting time is extended and some bleeding may occur. The early strength gain will be dramatically reduced. However, ultimate strength will be maintained. It is recommended that the Quickset Grout and the water be conditioned to 20-25˚C overnight or several hours before application. This will assist in strength development.

High Temperature Application:

At high temperatures greater than 30˚C, the grout setting time is reduced and grouting application becomes problematic due to very early setting times and reduced placement times.

It is recommended that Quick Set Grout be kept in a cool environment and the use of cold water be used for mixing. It is recommended that in instances where the temperature is greater than 30˚C, the grouting be conducted early in the day or late in the evening and sheltered from sunlight and direct heat.

Mixing-

Quick Set Grout is ready to use, simply requiring the addition of water.

Quick Set Grout must be mixed with a mechanical mixer with a high shear mixer or a suitable drum mixer that creates a forced action mixing.

For smaller quantity mixing, an electric drill with a spiral mixing paddle is suitable. The speed drill should be approx. 500-600 rpm.

DO NOT MIX BY HAND.

Flowable/ Pourable Grout:	Add 8.5 – 9.0 litres per 20kg bag

Always add the grout powder to the pre-measured water. DO NOT ADD ADDITIONAL WATER AS GROUT WIL SEGGREGATE AND BLEED AFFECTING PERFORMANCE.

The selected water level should be accurately measured and added to a suitable mixing container.

Add the powder (grout) to the water and mix for 1-2 minutes until a homogeneous consistent mix is obtained.

DO NOT ADD ADDITIONAL WATER OTHER THAN SPECIFIED ABOVE. DISCARD ANY GROUT THAT HAS STIFFENED OR IS UNWORKABLE.

Placement-

Quick Set Grout can be placed in two different ways:

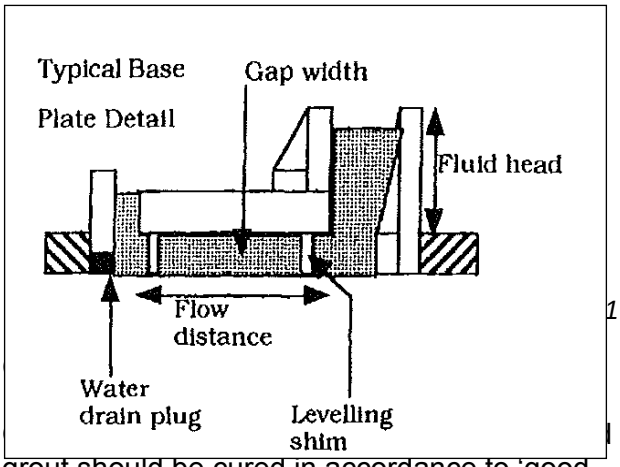
1. Gravity flow using header box-

   Mix the grout to a flowable consistency and pour grout from one side to avoid air entrapment. Ensure a grout head box is used and the grout head is maintained at all times. This will ensure continuous flow of grout without the possibility of air entrapment.

2. Large volume pumping-

   Mix the grout using a forced action mixer. A positive displacement pump is the recommended pump for large placement application. For large grout pours ensure the grout is pumped from the bottom upwards as this will minimize any air entrapment and ensure complete void filling. For base plates pump from one side ensuring an air bleeder hole is available in the formwork or base plate to ensure any build- up of pressure is released from the bleeder hole.

   DO NOT VIBRATE OR USE MECHANICAL VIBRATOR TO ASSIST FLOW.



grout should be cured in accordance to 'good practices' in concrete curing. The exposed grout should be covered with plastic sheeting; wet hessian or wet liquid curing compounds .Curing plays a vital role in ultimate grout performance and strength development.

TYPICAL PROPERTIES	
Appearance	Light grey powder (grey when mixed)
Application Temp	Minimum 5º C Maximum 35º C
Expansion characteristics	Expansion 1-2% in plastic state
Time for Expansion	Start 5 min Finish 25 min
Bleed	0%

Water Requirement (litres per bag)	Flowable 8.5 – 9.0
Initial Set (minutes)	15-20
Final Set (minutes)	20-30

COMPRESSIVE STRENGTH				
Age	Compressive Strength MPa		Flexural Tensile Strength MPa	
		Flowable		Flowable
1 hrs		>25		>1.6
2 hrs		>30		>1.8
6 hrs		>45		>2.4
24 hrs		>50		>3.2
3 days		>55		>3.6
7 days		>60		>7.0
28 days		>65		>9.5
Tested AS 1012.9 and AS2350-11 at 20˚C for compressive strength. Tested to ASTM C348-86 at 20˚C for flexural strength				

BOND STRENGTH		
Age (Days)		Flowable MPa
28		>10
Tested to ASTM C882-1987, Slant shear method.		

YIELDS		
Consistency		Flowable
litres of water - per 20kg bag		8.5 – 9.0
Yield - per bag litres		15litres approx.
Fresh wet density kg/m³		1950
Bags required – per cubic metre (m³)		67

SPECIFICATION CLAUSES

Performance specification-

All grouting shown on the drawing 1.1 must be carried out with a pre-packaged cement based grout which is chloride free.

It shall be mixed with clean water to the required consistency. The plastic grout must not bleed or segregate.

A positive volumetric expansion shall occur while the grout is plastic by means of a gaseous system.
The compressive strength of the grout must exceed 60 MPa at 7 days and 65 MPa at 28 days.
The storage and placement of the grout must be in strict accordance with the manufacturer's instructions.

Supplier's specification-

All grouting where shown on the drawing must be carried out using application instructions supplied by Hogan's and used in accordance with the manufacturer's data sheet.

PACKAGING

Quick Set Grout is supplied in 20kg poly lined bags or 20kg buckets.

STORAGE-SHELF LIFE

Quick Set Grout has shelf life of 9 months if stored in the original sealed packaging in dry, low humid environments.

PRECAUTIONS

- Unrestrained area must be kept to a minimum
- Do not add additional water other than what is specified
- Never apply mixed grout to a dry porous substance
- Refer to SDS (material safety data sheet) prior to mixing
- Always apply grout in a continuous operation ensure grout head is maintained
- At low temperatures, grout setting time and strength gain will be extended
- At very high temperatures, grout will set and cure faster potentially causing cracking and delemination

For more detailed information, please read the SDS for this product.

CLEAN UP

Wash all tools and equipment with fresh, clean water immediately after use. Quickset Grout can only be removed mechanically.

HEALTH AND SAFETY

Avoid contact with skin. Protective gloves and clothing are recommended when mixing or using this product. Please refer to full SDS (material safety data sheet) for this product, which is available from Hogan's upon request.

TECHNICAL SUPPORT

Hogan's manufactures a comprehensive range of high quality and performance construction products. In addition, Hogan's offers technical support and on-site advice to specifiers, end users and contractors.

Please contact your Hogan's sales representative or Head Office for this service.

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