

# DB 7 STAR HIGH FLOW GROUT



## Description

DB 7 Star High Flow Grout is a non shrink, very high strength cementitious grout comprising of low alkali high specific area Portland cements and other cementitious binders and a system of compatible admixtures to achieve high in service performance.

DB 7 Star High Flow Grout has high flow characteristics to achieve penetration and levelling with no bleed and zero shrinkage when placed at 0.31 water solid ratio. DB 7 Star High Flow Grout is a fine light grey powder.

## Uses

DB 7 Star High Flow Grout has been specifically designed to provide a very high strength fluid grout for pouring into and under stanchion plates, machine base plates, parapet rails, for supporting bridge bearings and for filling ducts in post tensioned and pre-stressed structures. However DB 7 Star Flow Grout is also available for more general applications.

## Key Properties

- Very high ultimate strength
- Shrinkage compensated in both the plastic and hardened states
- Can be used for grouting up sections 100mm thick.
- Chloride Free
- High Fluidity – can be pumped or poured
- Complies with U.S. Corps of Engineers Specification CRD-C 621

## Typical Performance

Compressive Strength N/mm <sup>2</sup> 20°C		Flexural Strength N/mm <sup>2</sup>	
1 day	25	1 day	3.9
7 days	45	7 days	8.3
28 days	72	28	10
56 days	75	days	
90 days	78		
Expansion Results %		Setting Times hours	
1 day	0.03	Initial	4
3 days	0.04	Final	6
Water/Solid Ratio	0.31	Pot Life	30 mins
Flow Characteristics A typical flow-channel figure for DB 7 Star High Flow Grout would be in the range of 500mm – 600mm.			
(The quoted performance characteristics are dependent on temperature and type and duration of mixing. Temperatures higher or lower than 20°C, for example will result in reduced or extended setting times).			

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## Mixing Instructions

DB 7 Star High Flow Grout should be mixed using water that complies with BS 3148 (as for concrete).

DB 7 Star High Flow Grout should be mixed in a suitable container using either an electric (1Kw) or pneumatic power tool. Larger amounts can be mixed in a FORCED ACTION paddle mixer.

25kg of the grout powder should be added carefully to 7.75 litres of water, progressively mixing until a fluid grout consistency is achieved.

Small Quantities can be mixed by hand, care being taken to accurately measure the water.

Once mixed, the material must not be re-worked.

## Application and Placing

DB 7 Star High Flow Grout can either be poured or pumped into position. Due to the relatively pot life pumped operations must be executed quickly particularly in warm weather conditions.

DB 7 Star High Flow Grout must be placed within 30 minutes from completion of mixing. Ensure all surfaces with which the grout will come into contact are clean and dust free. Ideally, concrete substrates should be thoroughly soaked for several hours prior to the grout being applied to reduce suction.

Permeable concrete should be treated with a suitable concrete primer. Shutters must be impermeable to the passage of water and both strong enough and sufficiently supported to contain the placed grout. Sufficient hydrostatic head must be given and maintained to enable the material to flow completely through the void to be filled. A minimum 50mm. Head is recommended. Immediately prior to placement all excess water should be removed. Any concrete exposed to wind or drying conditions should be suitably protected.

Any concrete that is likely to be subject to low temperature immediately after placing or during its early strength development should be protected by covering with hessian or other insulative material.

For concreting in cold weather reference should be made to BS 8110 Pt.1 Section 6.

See Figure 1 for shutter detail for pouring DB 7 Star High Flow Grout.

## Packaging & Storage

DB 7 Star High Flow Grout is available in nominally 25kg paper sacks and can also be palletised on timber pallets and can also be shrink-wrapped.

DB 7 Star High Flow Grout may also be available in IBC sacks or in bulk powder tankers.

DB 7 Star High Flow Grout should be stored in cool dry areas clear of the ground sheeted or under cover and stacked not more than two pallets high. The product should be used on a first in – first out basis.

Shelf life is minimum 3 months but could be in excess of 6 months subject to temperature and humidity.

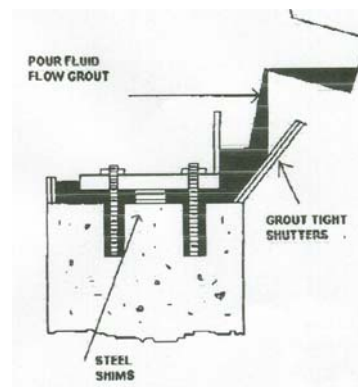


Figure 1. Grout Shutter Detail

## To Determine Quantity

The following figures should be used:

15.6 litres per 25kg powder = .625 m<sup>3</sup> per tonne or 1.6T per m<sup>3</sup> i.e 1.6kg per litre.