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TECHNICAL INFORMATION

CBG GROUT

Product Data Sheet: Mining Materials

DESCRIPTION

A grout suitable for rock and cable bolting must have some expansion to enhance bond and anchorage. It must provide protection to the bolts and cables in aggressive ground conditions, have an early gel time, and achieve a rapid strength development for early support. It must be easily mixed with water to a consistency that will flow through 6mm diameter apertures required when using GRP bolts and into any fractured ground around cable bolt holes. Grout effectiveness can be checked by using a rock bolt/cable bolt pull out test. This should not be carried out until the minimum cure period of 28 days.

CBG Grout is a non-shrink high flow grout comprising Portland Cement, pulverised fuel ash and selected additives.

USES

With modern mining techniques slowly replacing the use of steel work with other means of support, the need for a high strength bolting grout becomes ever more prevalent. It is well known that rock is relatively strong in compression and weak in tensile, shear and flexural strengths and often requires reinforcing. Further to this, excavated rock and coal surfaces often deteriorate on exposure. Bolting overlapping zones can safely and securely contain rock and coal within the vicinity of the bolts. The effective anchorage and bonding to the rock by the roof bolts, cable bolts and dowels is achieved by grouting. Thus the selection of the right grout is of paramount importance.

MIXING AND PLACING

CBG Grout powder should be added steadily to the required volume of water and mixed thoroughly using a standard grout mixer or propeller stirrer. The best results are achieved by using high shear mixing techniques for at least two minutes in order to adequately disperse the additives and to produce a creamy homogenous mix. This should then be pumped and injected by means of a wide throat pump such as a Mono cable bolting pump or similar. **CBG Grout** requires only the addition of clean potable water before use, (no adverse effects have been noted to date using mine water). The recommended water to total solids ratio is 0.31 (which equates to 6.2 litres of water per 20kg of powder or 7.75 litres of water per 25kg of powder), which produces a grout of a creamy consistency capable of being pumped a distance of 20m. Note: It should be injected within 20 minutes of mixing.

When checking the compressive strength of site mixed material, the correct size of test cube and the appropriate curing regime should be employed. Departure from this practice may lead to wide variations in apparent compressive strengths. It should be noted that grout/ground bond stress is of vital importance and is greatly enhanced by the expansive properties of the grout.

For more details contact:
03444 630 046 pozament@tarmacbp.co.uk

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TYPICAL PERFORMANCE

Compressive strength at 20°C (N/mm^2)[1]				
1 day	3 days	7 days	14 days	28 days
40	60	70	80	90
BS 7862-2 minimum requirements				
1 day	3 days	7 days	14 days	28 days
30	50	60	70	80
WSR		0.31		
Initial Set		3.5 hours		
Final Set		5.0 hours		
Working Time		20-30 minutes		
1 day set density		2010-2030kg/m^3		
28 day set density		2050-2080kg/m^3		
Yield per 20kg bag		12.68 litres		
Young's Modulus		26.5Gpa @ 28 days		
Required mixing time		Minimum 2 minutes		

[1]tested using 100mm cubes at 0.31 WSR. Cured at 20°C and at 100% humidity.

QUALITY CONTROL

All Pozament products are factory blended, tested and packaged to quality control procedures in accordance with BS EN ISO 9001.

CLEAN UP AND SPILLAGES

Dry powders should be swept up and disposed of in accordance with the Local Authority.

PACKAGING AND STORAGE

CBG Grout is available in nominal 20kg or 25kg sacks, palletised and shrink wrapped. **CBG Grout** may also be available in Intermediate Bulk Containers or in Bulk Powder Tankers. Palletised **CBG 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. If supplied in bulk form, **CBG Grout** should be stored in cement type silos with suitable dust control and batch weigh equipment.

INFORMATION, PRICES AND ORDERING

For additional technical information, pricing and to place orders contact our Sales Office on the following:

Telephone: 03444 630 046

Email: pozament@tarmacbp.co.uk

Visit our website: pozament.co.uk

Tarmac Building Products Ltd.,

Swains Park Industrial Estate, Park Road, Overseal,

Swadlincote, Derbyshire, DE12 6JT

HEALTH AND SAFETY

Health and safety advice, which must be followed, can be found on the Material Safety Data Sheet. Users are advised to wear face mask, goggles, gloves and overalls when handling, mixing and applying cementitious products.

Contains Portland Cement Contains Chromium (VI), which may produce an allergic reaction. Clothing contaminated by wet cement should be removed immediately and washed before reuse. R38 - Irritating to skin. R41 - Risk to serious damage to eyes. S26 - In case of contact with eyes, rinse immediately with water and seek medical advice. S37/39 - Wear

suitable gloves and eye/face protection. S2 - Keep out of reach of children.

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