

TECHNICAL INFORMATION

HIGH PERFORMANCE ROCK BOLT GROUT

Product Data Sheet: Mining Materials

DESCRIPTION

A grout suitable for 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.

HPRG Grout is specially formulated using cement, fillers and special additives to fulfil the above criteria.

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

HPRG Grout powder should be added steadily to the required volume of water and mixed thoroughly using a high shear grout mixer. (The best results are achieved by using high shear mixing techniques for at least five 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.

HPRG 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 0.30 when it is of a thixotropic consistency capable of being pumped a distance of 30m into a hole and remaining there without the need to seal the hole.

TYPICAL PERFORMANCE

Compressive strength at 20°C (N/mm ²) ¹				
1 day	3 days	7 days	14 days	28 days
35	55	65	75	85
BS 7862-2 minimum requirements				
1 day	3 days	7 days	14 days	28 days
30	50	60	70	80
WSR		0.30		
Initial Set		4 hours		
Final Set		5.0 hours		
Working Time		20-30 minutes		
1 day set density		2020-2040kg/m ³		
28 day set density		2040-2080kg/m ³		
Yield per 20kg bag		12.64 litres		
Required mixing time		Minimum 5 minutes		

¹tested using 100mm cubes at 0.30 WSR. Cured at 20°C and at 100% humidity.

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

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The information given in this technical data sheet is based on our current knowledge and is intended to provide general notes on our products and their uses. Tarmac endeavours to ensure that the information given is accurate, but accepts no liability for its use or its suitability for particular application because of the product being used by the third party without our supervision. Any existing intellectual property right must be observed.

Tests on HPRG Grout have been carried out to BS 7861-2 the results of which are shown below:

Tendon	Max Load kN	System Stiffness (20-400kN/mm)
HPRG Grout Double Bird Caged Cablebolt	624	11.2
BS 7861-2 lower limit	560	100

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

HPRG Grout is available in nominal 20kg or 25kg sacks, palletised and shrink wrapped. **HPRG Grout** may also be available in Intermediate Bulk Containers or in Bulk Powder Tankers. Palletised **HPRG 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, **HPRG 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

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 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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