

## MULTI MRS 26 Rock Support Grout

### Description

MULTI MRS 26 a pumpable roof bolt grout that attains rapid early strength. The low water / cement ratio ensures high early strengths at low temperatures. Incorporated into the formula are a selection of chemicals which:

- \* Are absorbed by the cement particles which in turn accelerates the dissolving action of the silicates and the solubility of the aluminates in the cement composition.
- \* Also renders the hydraulic cement particles hydrophobic which facilitates mobility

### Typical Applications

- \* Mining rock support
- \* Grouting of anchor bolts
- \* Tunneling
- \* Grouting where quick support is required

### Advantages

- \* Highly pumpable.
- \* Early strength development without the use of chlorides
- \* Excellent bonding characteristics
- \* Easy application
- \* Provides high mobility through small clearances
- \* Non shrink - Controlled chemical expansion agents counteracts shrinkage
- \* Thixotropic action - no volume loss of grout from overhead holes
- \* Pre-mixed - eliminates mix selection problems underground and therefore reducing risk of failure

### Typical Properties

**Compressive Strengths:** Strength development of MULTI MRS 26 is dependent upon the water/ cement ratio as well as the rock face temperature. The increase in the w/c ratio or a lowering of temperature will drastically affect the strength gained in the early stages. The reverse holds true and in turn will affect the placing period and strength development. In accordance with ASTM C109-77, typical results achieved are:

Age	MPA
4 Hours	5
6 hours	10
12 hours	15
7 days	44
28 days	62

**Pull out Strengths:** MULTI MRS 26 will achieve a minimum bond pull out strength of 10 tons in 4 hours depending on rock face temperature.

### Yield

One 25kg bag of MULTI MRS 26 mixed with 8 litres of water will yield 14 litres offluid grout (72 x25kg bags per/ m3.)

### Directions for Use

- \* Add 8 litres of water per 25 kg bag and mix with a high speed stirrer.
- \* Using a positive or piston type pump, pump the liquid grout into the drilled hole.
- \* Insert roof bolt, wire rope, dowel or shepherd's crook into the hole and leave to set.
- \* Bond pull out tests can be carried out between 2-4 hours after placing the grout.

### Where not to Use

- \* In acidic environments and with other materials which seriously and rapidly attack cement.
- \* In applications for precision grouting - refer to Product Data Sheets on precision grouting.
- \* In situations where prolonged mixing and placing periods would be encountered.

### Packaging

Supplied in 25kg polypropylene bags with inner liner

### Quality Assurance

MCC LIMPOPO production and testing programmes comply with all local and international standards as set out by the mines. These stringent testing requirements also comply with ASTM C109-77, performance specification for cementitious grout.

### Updates

This data sheet supersedes all previous issues prior to this date: 31/05/97.