

**MINING**

# Capcem™ 1/4 Capsules

## CEMENTITIOUS ANCHORING GROUT

### DESCRIPTION

Capcem™ Ultrafast (1/4) capsules are supplied as ready to use dry powder encapsulated in a water permeable skin. When required for use, the capsules are soaked in water which is absorbed through the skin, forming a thixotropic non-shrink grout. The capsules absorb the correct amount of water.

### APPLICATION AND USE

For easy grouting in rock anchoring applications, particularly overhead roof bolting as encountered in mining and tunnelling.

### ADVANTAGES

- Encapsulated
  - Controlled water: powder ratio
  - Eliminates mixing equipment
  - Minimal wastage of grout
- Non-shrink - Expansion agents counteract shrinkage and ensure effective contact between bar and grout
- Chloride Free - Rapid strength development without the use of chlorides ensures absence of corrosion
- Thixotropic - No loss of grout even from overhead holes, due to the thixotropic nature of the grout



### TECHNICAL DATA

#### SETTING GRADES

The table below gives the typical laboratory results for the pull strength per 200mm bond length on 16mm deformed rebar, and compressive strength at various curing ages, curing at 25°C.

Grout Performance (Typical)		
Curing Age	Compressive Strength (MPa)	Pull Strength (Tonnes)
1 Hour	8.0	4.8
2 Hours	9.6	6.2
4 Hours	12.8	7.8
24 Hours	16.0	8.4
7 Days	16.4	9.0
28 Days	17.1	10.0
56 Days	18.9	11.0

**APPLICATION METHOD**

The capsules are removed from their packaging and soaked in clean water for 3 minutes, or longer if there are still signs of air release (bubbling) from the capsules. Only 1 bag of capsules should be soaked at a time, otherwise the grout may begin to set before installation.

Once the contents of the capsules are thoroughly wetted out the capsules are removed from the water, allowed to drain for 1 minute to remove excess water, and then inserted into the drilled hole with the aid of a charging stick or pneumatic loader until the hole has been filled. The bar is then wetted, inserted into the hole and pushed through the capsules to the back of the hole.

**SAFETY INSTRUCTIONS AND LIMITATIONS**

Capcem™ Ultrafast (1/4) capsules are non-toxic, but like all cements, are alkaline in nature. The use of gloves, goggles and a dust mask is recommended. Splashes should be removed from skin and eyes by washing with plenty of clean water. In the case of splashes in the eyes, medical attention should be sought immediately. Refer to Material Safety Data Sheet.

It must be noted that rock temperature will influence rate of set and strength gain the higher the temperature, the faster the set and more rapid the strength gain. Capcem™ Ultrafast (1/4) Capsules should only be used for rock temperatures up to 45°C. If rock temperature is above 45°C, consult our technical department.

**PACKAGING AND TRANSPORTATION**

Capcem™ Ultrafast (1/4) capsules are supplied in woven polypropylene carrying bags with an inner polythene liner.

The following standard sizes are available for the Capcem™ Ultrafast 1/4 Capsule:

Diameter (mm)	Number per bag	Minimum Grout volume yield per capsule (ml)
25	30	125
28	28	150

**Note:** Allowance should be made for wastage when estimating.

**STORAGE AND SHELF LIFE**

Capcem™ Ultrafast (1/4) capsules have a shelf life of 12 months when stored unopened in the original bags in cool, dry conditions. Store out of direct sunlight to prevent degradation of packaging.

**DISPOSAL**

Follow local regulations.

**DISCLAIMER**

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**ADDITIONAL DOCUMENTATION**

- MSDS of Capcem™ 1/4 Capsules

**LIST OF REPRESENTATIVES**

- AUSTRIA: Minova MAI GmbH
- CZECH REPUBLIC: Minova Bohemia s.r.o.
- FRANCE / BELGIUM: Sales office Minova France / Belgium
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- ITALY: Minova CarboTech GmbH Italy branch
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