

▶ Description

TamCrete MFC SR is a microfine portland cement for rock and soil injection. Due to its fine particle size it penetrates very well into tight joints, fissures and pore spaces to provide a water-tight grouted rock or soil mass.

TamCrete MFC SR is ground from pure Portland Cement clinker to achieve a blaine surface value of 650m²/kg. TamCrete MFC SR achieves initial and final setting faster than OPC and other microfine cements. This increases productivity in a tunnel grouting operation. The short open time of 1 to 1½ hours and a very short setting time of 2½ hours reduces the waiting time and keeps delays to a minimum.

TamCrete MFC SR is quality assured by the Cement Industry Quality Assurance Scheme, independently monitored by the British Standards Institute (SBI QAS 2420/47)

▶ Key Benefits

- Standard cement injection equipment can be used
- Superior penetration into rock fissures
- Fast initial gel and setting
- Higher strengths achievable compared with chemical grouts
- Greater penetration imparts greater water tightness
- Better working environment and no hazardous components
- Durable
- Economical solution

▶ Typical Applications

- Rockmass grouting for tunnels, caverns, mines, etc., used for pre and post excavation injection. Ground water sealing and ground stabilization.
- Soil Injection: Ground stabilization, ground water sealing.
- Concrete crack injection
- Consolidation of weak and fractured rock
- Sealing of water channels

▶ Technical Data

TamCrete MFC SR	
Blaine	625 - 650m ² /kg
Particle Size	
< 30 microns	100%
< 20 microns	95%
< 15 microns	93%
< 10 microns	75%
< 5 microns	44%
< 3 microns	16%

All technical data stated herein is based on tests carried out under laboratory conditions.

▶ Application Guidelines

Setting Time

The setting times, at a 1:1 W:C ratio (by weight) are as follows:

Setting Times	
Initial Set	50 - 60min
Final Set	120 - 150min
Mud Balance	1.48 - 1.50kg/l
Water/Cement Ratio	1.0
Flow Cone	32 - 34sec
Bleeding Maximum	2%

Injection

High-pressure piston pumps are normally used to pump the suspension into the rock. The grout should be injected within 30 - 40 minutes after mixing to ensure that it keeps penetrating into the fissures. Longer open times can be achieved with TamCem HCA hydration control admixture.

TamCrete MFC SR

Microfine Portland Cement for Injection



Mixing

Water/Cement ratio (by weight) shall normally be between 0.8 - 1.2.

- Fill the mixer with water.
- Add Cement. Mix for 2 - 3 minutes.
- Transfer to agitator.

Colloidal mixers are most suitable, however high-speed paddle mixers are also acceptable.

Minimum rpm for colloidal mixers: 1500rpm

Minimum rpm for paddle mixers: 400rpm

Note: Mixing time should be kept to a maximum of 4 minutes.

Pot Life

The mix shall be kept under constant agitation prior to injection. Do not keep grout in agitator for longer than 40 minutes.

Hardening

TamCrete MFC SR will have set sufficiently after 2 - 2½ hours to allow drilling to commence for control or blast holes.

▶ Storage

TamCrete MFC SR should be stored at room temperature (min 10°C and max 45°C), kept dry and out of direct sunlight. If these conditions are maintained and the product packaging is unopened, then a shelf life of 6 months can be expected.

▶ Health & Safety

TamCrete MFC SR should only be used as directed. We always recommend that the Health & Safety data sheet is carefully read prior to application of the material. Our recommendations for protective equipment should be strictly adhered to for your personal protection. The Health & Safety data sheet is available upon request from your local TAM International representative.

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