

MasterRoc[®] MP 326

Solvent-free, low viscosity, high strength, hydrophilic grout for rock injection, ground improvement, and the consolidation of sand and silt strata

Description

MasterRoc MP 326 is a single-component mineral injection grout based on advanced nanometric colloidal silicate technology. The product is solvent-free, non-toxic, and does not foam. With adjustable gel times, superior adhesion to various surfaces, and the capability of developing higher compressive strength, MasterRoc MP 326 is an economical and environmentally friendly alternative to traditional grouting materials such as acrylics, sodium silicate, microfine cement, polyurethane, polyurea silicate, etc.

Applications

- Consolidation of sand- and silt-based strata
- Injection into fine joints and fissures in rock
- Slope stabilization and soil stabilization
- Ground improvement
- Liquefaction mitigation
- Pre-injection grouting in tunnel constructions
- Waterproofing of existing tunnels
- Water ingress control and wall stabilization in mining applications
- Seepage control
- Underground infrastructure protection

Features

- Very low viscosity
- Excellent bonding to wet surfaces
- Adjustable and controlled gel times with an accelerator
- Wide range of workable temperatures from 40 °F to 105 °F (5 °C to 40 °C)
- Suitable for use with both one- and two-component pumps

Benefits

- Excellent penetration
- Minimal ground disturbance
- Long-term strength development
- Enhanced efficiency in grouting applications
- Non-aggressive and environmentally preferable

Chemical & Physical Characteristics

Technical Data

Form	Suspension
Color	Clear to slightly cloudy
Density*	74.9 lb/ft ³ (1.2 g/cm ³)
pH*	10.5
Viscosity*	7 cP (mPa.s)

* @ 68 °F (20 °C)

Guidelines for Use

Gel Time: The desired gel time can be achieved by adding an accelerator, typically a 10% NaCl solution, at the required ratio. Refer to Figure 1 for gel time variations based on accelerator dosage and temperature.

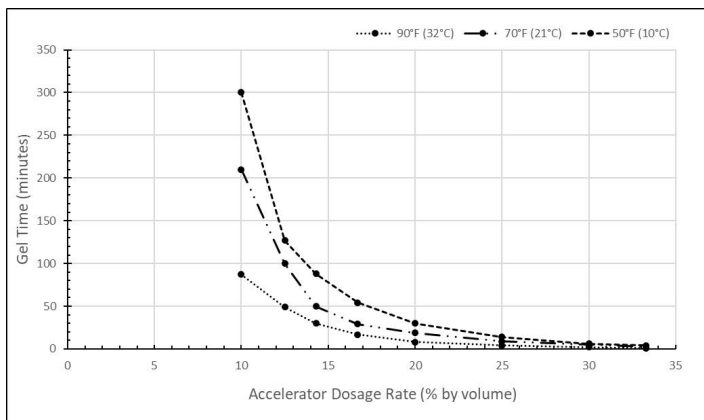


Figure 1

To achieve longer gel times, accelerators of less than 10% NaCl concentration may be used. Please consult your Master Builders Representatives for more information.

Application Procedures: MasterRoc MP 326 must be continuously stirred during the addition of the accelerator, which needs to be fully mixed before pumping. The fully mixed MasterRoc MP 326 and the accelerator can be pumped into the strata or ground with a single-component pump through an injection packer system.

MasterRoc MP 326 and the accelerator can also be injected via two-component equipment. In that case, a static in-line mixer is necessary to mix the MasterRoc MP 326 and the accelerator thoroughly.

Cleaning of the Injection Equipment: All equipment can be cleaned with fresh water.

Performance Characteristics

Compressive Strength Development: Proper application of MasterRoc MP 326 enhances soil strength, improves ground stability, and reduces permeability. Over time, it develops higher compressive strength compared to traditional ground improvement materials. Refer to Figure 2 for strength development data (tested per ASTM D 4219).

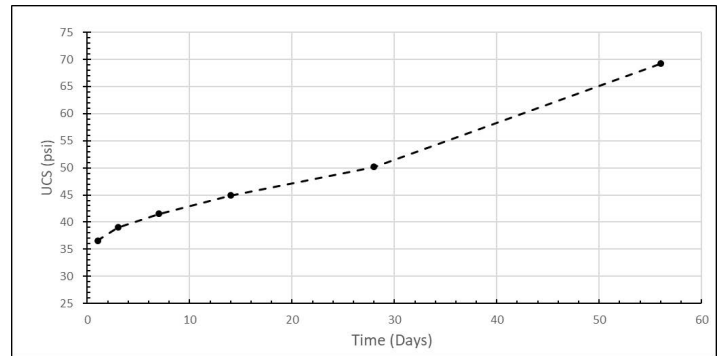


Figure 2

- Testing standard: ASTM D 4219 – 22
- Material and ambient temperature: 70°F (21°C)
- Mix design: Ottawa 20-30 sand, MasterRoc MP 326, accelerator (10% NaCl solution)
- Setup: 2"x4" (5x10 cm) cylinder

Permeability:

- < 1x10-8 cm/sec (Tested per ASTM D 5084)
- Testing Conditions: Conducted at 68°F (20°C) with Ottawa 20/30 sand remolded to a medium-dense state and grouted with MasterRoc MP 326. Cured mixtures were tested under an effective stress of 5 psi (35 kPa). Results based on 28-day data.

Storage and Handling

Storage: MasterRoc MP 326 should be stored between 40 °F and 95 °F (5 °C and 35°C). Do not allow the product to freeze. Store under cover, away from direct sunlight and extreme temperatures.

Shelf Life: MasterRoc MP 326 has a shelf life of at least 12 months when stored in unopened, tightly sealed original containers. For MasterRoc MP 326 stored for more than 12 months, consult your Master Builders Solutions representative before use.

Safety: MasterRoc MP 326 contains no hazardous materials that require labeling. Standard precautions for handling chemical products should be followed:

- Avoid eye and skin contact.
- Wear hand gloves and safety goggles.
- If contact occurs, rinse with plenty of water.
- In case of eye contact, seek medical attention immediately.
- The cured grout is physiologically harmless.

Packaging

MasterRoc MP 326 is available in IBC totes, drums, and pails. Bulk delivery is available upon request. For further details, contact your Master Builders Solutions representative

Related Documents

Safety Data Sheet (SDS): MasterRoc MP 326.

Additional Information

For additional information on MasterRoc MP 326, please contact your local sales representative.

Master Builders Solutions creates technologies for the construction industry inspiring people to build better. We are active in ~40 countries and operate 35 production sites with over 1,600 employees. We develop, produce, and market high-quality chemical admixtures, as well as adjacent core technologies, to master the challenges of today and support a decarbonized future. Our people are pivotal and pair leading technologies and a strong brand heritage to surpass our customers' expectations and drive continuous value creation.

Limited Warranty Notice

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