MasterRoc® MP 320

Solvent-free, low viscosity, hydrophilic grout for rock injection and consolidation of sandy and silty strata

DESCRIPTION

MasterRoc MP 320 is a one-component injection system, based on a nanometric colloidal silica suspension of primary, discrete particles. Due to the hydrophilic nature of the product, the adhesion is also good to wet surfaces. The non-foaming product contains neither solvents nor toxic components.

TYPICAL APPLICATIONS

- Pre-injection grouting for underground application
- Also suitable for post injection
- Ground improvement
- Water ingress reduction
- Slope stabilization

ADVANTAGES

- Very low viscosity
- As the product is non-aggressive, it provides improved working safety
- No environmental impact
- Good bonding to wet surfaces
- Controlled gel time with the use of an accelerator
- Simple mixing and pumping equipment as used with cementitious grouts can be used

PACKAGING

MasterRoc MP 320 Part A:
210 liter (273kg) drums and 1000 liter (1300kg) containers

MasterRoc MP 320 Accelerator:
196 liter (210kg) drums and 935 liter (1000kg) containers

TYPICAL PROPERTIES*

MasterRoc MP 320 Part A

Color		Whitish/clear
Viscosity	(20°C, AP-014)	~10 mPa.s
Density	(20ºC, AP-005)	1.3 kg/l
pH	(20ºC, AP-009)	9.5 to 9.8
SiO_2 concentration		40 ± 1 %

MasterRoc MP 320 Accelerator

Color		Clear
Viscosity	(20ºC, AP-014)	~1 mPa.s
Density	(20ºC, AP-005)	1.07kg/l
pH	(20ºC, AP-009)	7

Mixed material (values given are dependent on mix)

Color		Whitish / Clear
Viscosity	(20ºC, AP-014)	~5 mPa.s
Density	(20ºC, AP-005)	~1.25kg/l
pH	(20ºC, AP-009)	~9 dependent on ratio

APPLICATION GUIDELINES

The accelerator is added to **MasterRoc MP 320** Part A at the required ratio. Ensure **MasterRoc MP 320** Part A is continuously stirred during the addition of the accelerator, and fully pre-mixed prior to pumping.

The mixture of **MasterRoc MP 320** and the **MasterRoc MP 320** Accelerator is workable between +5°C and +40°C. It is pumped with a one component pump, such as a cement grout injection pump, through an injection packer system into the strata. For slow migration into sand and gravels, a worm pump may also be considered.

MasterRoc MP 320 and accelerator can also be injected using a two-component pump. In this case, a static in-line mixer is necessary to achieve a good mixing of the two components.

MasterRoc® MP 320

To achieve controlled, targeted injection into sands and gravels, it is advised to use double packers within tube à manchette injection tubes (often referred to as “TAMs” or “SPPs”) with port centers dependent on the fineness of soils, and degree of stabilization required.

GEL TIME

MasterRoc MP 320 is produced in three different facilities worldwide. It is important to establish which product you have been supplied to choose the correct accelerator dosage for a given gel time.

The gel time may be adjusted by varying the quantity of accelerator for **MasterRoc MP 320** added to Part A.

It can be adjusted between 10 minutes and several hours as indicated in Figure 1. For long gel time, the temperature will have a big influence. Site tests are recommended.

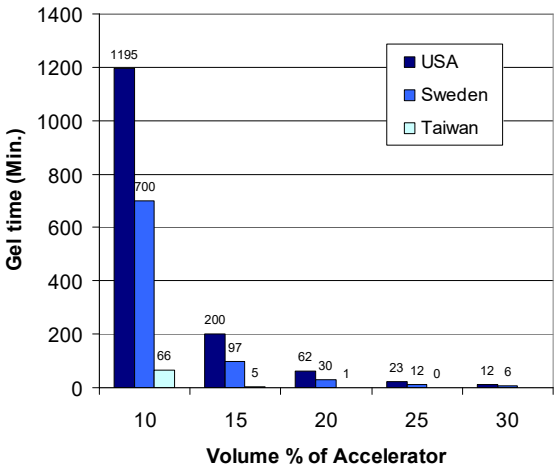

Figure 1: Adjustable gel time with varying accelerator dosage. Values given are at 8°C.

CLEANING OF INJECTION EQUIPMENT

All equipment can be cleaned with fresh water.

STORAGE AND SHELF LIFE

In unopened, tightly closed original containers, the components of **MasterRoc MP 320** may be stored for up to 18 months, if kept dry and within a temperature range of 5-35°C. Protect from sunlight.

HEALTH AND SAFETY

Colloidal silica will irritate the eyes and the skin. Normal precautions (safety glasses, gloves and overall) should be taken. **MasterRoc MP 320** is physiologically harmless.

For further information, refer to the product Material Safety Data Sheet.

* Properties listed are based on laboratory controlled tests.

MBS_CC-UAE/Roc_MP320/v3/03_15

Master Builders Solutions
Construction Chemicals LLC
P.O. Box 37127, Dubai, UAE
Tel: +971 4 8090800
www.master-builders-solutions.com/en-ae