

# 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 nonfoaming 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	(20°C, AP-005)	1.3 kg/l
pH	(20°C, AP-009)	9.5 to 9.8
SiO <sub>2</sub> concentration		40 ± 1 %

### MasterRoc MP 320 Accelerator

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

#### Mixed material (values given are dependent on mix)

Color	(1	Whitish / Clear
Viscosity	(20°C, AP-014)	~5 mPa.s
Density	(20°C, AP-005)	~1.25kg/l
pН	(20°C, 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.

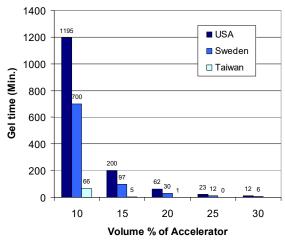


Figure 1: Adjustable gel time with varying accelerator dosage. Values given are at 8°C.

# **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.
- ® = Registered trademark of the MBCC Group in many countries.

MBS\_CC-UAE/Roc\_MP320/v3/03\_15

# STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by Master Builders Solutions either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not Master Builders Solutions, are responsible for carrying out procedures appropriate to a specific application.

Master Builders Solutions Construction Chemicals LLC P.O. Box 37127, Dubai, UAE Tel: +971 4 8090800 www.master-builders-solutions.com/en-ae **Disclaimer:** the TUV mark relates to certified management system and not to the product mentioned on this datasheet





