

MEYCO® MP320

Solvent-free, low viscosity, hydrophilic grout for rock injection and consolidation of sand and silt strata

Product description

MEYCO® MP 320 is a “one component” injection system, based on a nanometric colloidal silica suspension of primary, discrete particles. The open time can be adjusted with an accelerator. The product may be used between +5°C and +40°C and contains neither solvents nor toxic components.

The gel time may be adjusted by varying the quantity of Accelerator for MEYCO® MP 320 added to Component A. Due to the hydrophilic nature of the product, the adhesion is also good to wet surfaces. There is no foam reaction that can negatively influence the bond. Equipment can easily be cleaned using water.

Fields of application

MEYCO® MP 320 has been developed for injection into fine joints and fissures in rock and for the consolidation of sand and silt based strata. These properties are particularly well suited for the following:

- Pre-injection grouting for tunnelling projects
- Waterproofing of existing tunnels
- Mining applications for waterproofing and stabilisation
- Slope stabilisation in rock
- As a component of ground improvement techniques

Features and benefits

- Very low viscosity
- Controlled gel time with the use of an accelerator
- Simple mixing and pumping equipment as used with cementitious grouts can be used
- Good bonding to wet surfaces
- Workable between +5°C and + 40°C
- As the product is non-aggressive, it provides improved working safety, reduced environmental impact and low handling costs

Packaging

MEYCO® MP 320 is available in standard sets containing:

MEYCO® MP 320 Component A:

210 litre drums or 1000 litre containers

Accelerator for Component A:

210 litre drums or 1000 litre containers

For bulk supply, please discuss with your local Degussa UGC Representative.

Technical data

MEYCO® MP 320 Component A

Colour	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 ₂ concentration	40 ± 1 %

MEYCO® MP 320 Accelerator

Colour	Clear
Viscosity (20°C, AP-014)	~1 mPa.s
Density (20°C, AP-005)	1.07 kg/m³
pH (20°C, AP-009)	7

Mixed material (values given are dependant on mix)

Colour	Whitish/clear
Viscosity (20°C, AP-014)	~5 mPa.s
Density (20°C, AP-005)	~1.25 kg/m³
pH (20°C, AP-009)	~9 dependent on ratio

Application procedure

The accelerator is added to component A at the required ratio. Ensure component A is continuously stirred during the addition of the accelerator, and fully pre-mixed prior to pumping. The mixture of MEYCO® MP 320 and accelerator for MEYCO® MP 320 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.

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 centres dependant on the fineness of soils, and degree of stabilisation required.

Gel time

MEYCO® MP 320 is produced in three different facilities worldwide. It is important to distinguish which product you have been

supplied to establish correct accelerator dosage for a given gel time.

The gel time of MEYCO® MP 320 is controlled by the dosage of accelerator and effected by temperature. The gel time can be adjusted between 10 minutes and up to several hours as indicated in Figure 1. For long gel time, the temperature will have big influence.

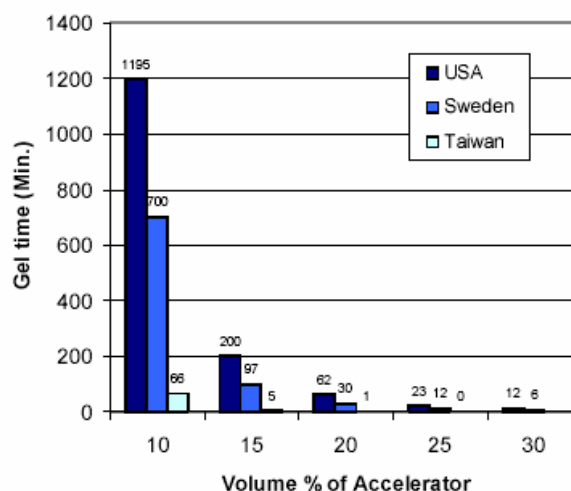


Figure 1: Adjustable gel time with varying accelerator dosage. Values given are at 8°C.

Cleaning of injection equipment

All equipment can be cleaned with fresh water.

Storage

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

Safety precautions

Colloidal silica will irritate the eyes and the skin. Normal hygienic precautions (protective glasses, gloves and overall) should be taken. Wash hands before eating or smoking. The cured MEYCO® MP 320 is physiologically harmless. For further information, refer to the product Material Safety Data Sheet.