



CRETESTONE

## CRETESTONE CS-290

[Solvent-Free, Low Viscosity, Hydrophilic Grout for Rock Injection and Consolidation of Sandy and Silty Strata]

### Description

CRETESTONE CS-290 is a one-component injection system, based on a nano metric 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.

### 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

### Application Areas

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

### Application Process

The accelerator is added to CRESTESTONE CS-290 Part A at the required ratio. Ensure that Part A is continuously stirred during the addition of the accelerator, and fully pre-mixed prior to pumping.

The mixture of CRESTESTONE CS-290 and the CRESTESTONE CS-290 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.

CRESTESTONE CS-290 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.

### Processing time

CRESTESTONE CS-290 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 gelling time.

The gelling time may be adjusted by varying the quantity of accelerator for CRESTESTONE CS-290 added to Part A.

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

## CRETESTONE PRIVATE LIMITED



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## Technical Specifications

### CRETESTONE CS-290 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 %

### CRETESTONE CS-290 Accelerator

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

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

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

### Packing

CRETESTONE CS-290 Part A:

210-liter (273kg) drums and 1000-liter (1300kg) containers

CRETESTONE CS-290 Accelerator:

196-liter (210kg) drums and 935-liter (1000kg) containers

### Health and Safety

Colloidal silica will irritate the eyes and the skin. Normal precautions (safety glasses, gloves and overall) should be taken. CRETESTONE CS-290 is physiologically harmless.

### Storage and Shelf Life

In unopened, tightly closed original containers, the components of CRETESTONE CS-290 may be stored for up to 18 months, if kept dry and within a temperature range of 5-35°C. Protect from sunlight.

### Disclaimer

Whilst any information contained herein is true, accurate and represents our best knowledge and experience, no warranty is given or implied with any recommendations made by us, our representatives or distributors, as the conditions of use and the competence of any labour involved in the application are beyond our control.

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