



Nano-silica Based Hydrophilic Soil Sealer / Grout For Use In Soil Consolidation, Injection And Stabilisation Of Loose Earth Strata

General

SS – SoilSeal 2K is a soil stabilizer, based on hydrophilic amorphous nano-silica dispersed in water. It is a two component system comprising of the nano-silica dispersion and a suitable accelerator. In the presence of an accelerating agent, the base component is very stable to aggregation or gelation.

By controlling the amount of accelerator, the gel time of the mixture can be varied for different applications.

SS – SoilSeal 2K has a low viscosity and penetrates the soil surfaces and forms an excellent cohesive bond between the soil particles. It can be used as a treatment in combating soil erosion, or as a stabilizer for loose strata, stabilizing road bases, rock injection and tunneling applications.

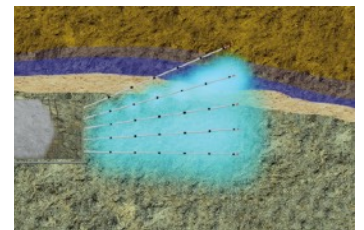
SS - SoilSeal 2K It is a non-toxic, non-corrosive, non-flammable auxiliary chemical formulated to provide safe and economical soil stabilization. The gel product is environmentally benign. SS - SoilSeal 2K is solvent free. The gelling process once complete is permanent and irreversible.

Product Features

- Solvent Free, Environmentally Friendly
- Safe, non-toxic and non-corrosive
- Very Low Viscosity, to penetrate deep into soil strata
- Gel time can be easily controlled by varying accelerator concentration
- Easy to mix and pump into the soil
- Good bonding to wet surfaces
- Contains no aggressive or corrosive chemicals
- Resultant gel is amorphous silica, environmentally benign
- Easy to dispose
- Usable between 10°C and 45°C



Soil & Slope Stabilization



Areas of Application

- Capillary Crack Injection in Rocks
- Soil Stabilisation to increase load capacity of certain soil types
- Combating Soil Erosion
- Stabilising Sandy Silt Strata
- Pre Injection in Tunneling Projects
- Water Ingress prevention in Mines
- Slope and Cut Stabilization
- General Ground Improvement Injection
- Stabilizing Road Sub-bases

Areas of Application

Specification Keywords	Nano-Silica based Non Toxic, Environment friendly, Soil Stabilizer, Ground Consolidation, Rock Fissure Grouting
Delivered As	Component 1: Whitish Liquid; Component 2: Clear Liquid
Storage Instructions	Store in a cool and dry area away from sunlight, in original packaging
Shelf Life	12 Months
Post Use	Empty packaging completely. Dispose as per local regulations.
Packing Size	30 kg, 5 kg



Hazards and Safety



Technical Data

Viscosity	Component 1: < 50 cps; Component 2: < 10 cps
Sp. Gravity	Component 1: 1.20 ± 0.05; Component 2: 1.00 ± 0.05
pH	Component 1: 9 to 11; Component 2: 7.00
Mixing Ratio	15 - 30% Component 2 to Component 1, by weight
Pot Life	Depends on dosage of accelerator

Instructions for Use

The accelerator component is thoroughly mixed with the base component of **SS – SoilSeal 2K** at various volumetric ratios in a laboratory or on site. The ratio corresponding to the desired gel-time is established. The gel-time can be controlled from few minutes to few hours.

Next the base component and accelerator are thoroughly mixed in a vessel according to the predetermined ratio. Only the estimated quantity required for the particular job is prepared. Any excess material cannot be stored for later use. The homogeneous mixture is then pumped with an appropriate packer injection system.

Packer injection systems commonly used for micro-fine cement grouts can be used for this application. A double packer injection system will help in controlled and correct dosing of the mixture in sandy and large grained grounds depending upon the fineness of the ground and the stabilisation desired. Deeper applications of the material can be achieved by using injection lances.

Safety and Precautions

- Take suitable safety precautions at all times. Always wear protective goggles, safety shoes, masks and gloves.
- If inhaled, move immediately to fresh air. In case of skin or eye contact, flush immediately with water for 15 minutes. Remove contaminated clothing and shoes and call a physician.
- Clean up promptly after job is complete. Clean equipment with water and allow to dry in a well-ventilated area. Local, state and federal regulations should be consulted for proper disposal procedures.