



Hychem Soil CS30

COLLOIDAL SILICA FOR SOIL AND ROCK INJECTION

Description

Hychem Soil CS30 is a single-component, ultra-low viscosity colloidal silica system engineered for permeation grouting applications in fine-grained soils such as sands and silts, as well as for sealing microfractures and discontinuities in rock strata. The material exhibits high chemical stability and is environmentally benign, making it suitable for use in sensitive geotechnical and underground environments. The formulation allows precise control over gel time through modulation of the accelerator concentration, enabling deep penetration and controlled setting in low-permeability substrates. Its hydrophilic characteristics facilitate strong adhesion to moist or fully saturated surfaces, enhancing long-term sealing performance in wet conditions.

Key Benefits

- Single component
- Ultra-low viscosity
- Excellent adhesion to wet surfaces
- Solvent-free and environmentally friendly
- Adjustable gel time
- Standard grouting equipment can be used
- Water clean up

Typical Applications

- For injection of sand, silt and silty strata
- Consolidation of soil
- Passive ground stabilisation
- Suitable as a concrete hardener/densifier

Technical Data

Technical Data @20°C		
	Hychem Soil CS30	Hychem CS30 Accelerator
Form	Liquid	Liquid
Density (g/cm ³)	1.191 - 1.211	1.07
Viscosity (cP)	5	2
Solids w/w%	29 - 32	-
PH Value	9 - 10	6 - 7
Average particle size	7.0 - 10.0	-
Free alkalinity (as Na ₂ O)	0.35 - 0.65	-

All technical data stated herein is based on tests carried out under laboratory conditions.



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Application Guidelines

Pre-determine the required gel time of Hychem Soil CS30. Results based on Hychem Soil CS30 and ambient temperature of 20°C.

Accelerator Volume	10%	15%	20%
Gel time achieved	45 - 55 mins	20 - 25 mins	4 - 5 mins

Add the required dosage of accelerator to the Hychem Soil CS30 whilst agitating and ensure it is well mixed prior to commencement of injection. Mix for 2 minutes.

Pump the Hychem Soil CS30 through an injection packer or injection spear using any kind of grout pump, such as a mono type, diaphragm type or piston pump.

Note: Contact your Hychem Technical team for technical installation advice.

Packaging

Hychem Soil CS30 and Hychem CS30 Accelerator are available in 20 litre pails, 200 litre drums and 1000 litre IBC tanks. Packaging size may vary subject to local regulations and requirements.

Storage

Hychem Soil CS30 should be stored at room temperature above 5°C, kept dry and out of direct sunlight. If these conditions are maintained and the product packaging is unopened, then a shelf life of one year can be expected.

Health & Safety

Hychem Soil CS30 should only be used as directed. We always recommend that the Safety Data Sheet (SDS) is carefully read prior to application of the material. Our recommendations for protective equipment should be strictly adhered to for your personal protection. The Safety Data Sheet is available upon request from Hychem technical team.

Warranties and Disclaimers

Hychem warrants that this product shall conform to the technical specifications published in the product literature. The quality and fitness of the product is dependent upon the proper use and application of the product by the applicator. Hychem has no role in the application of the finished polymer other than to manufacture and supply its components. It is vital that the person applying this product understands the product and is fully trained and certified in the use of spray equipment and application of sol-gel materials. There are no warranties that extend beyond the description on the face of this instrument, except when provided in writing, directly by Hychem and executed under seal by a company officer.

Field Support

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

Customer Responsibility

The technical information and application advice given in this publication is based on the best information available at the time of print. As the information herein is of a general nature, no assumption can be made as to the product 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 Commonwealth or State Legislation. The owner, his representative or the contractor is responsible for checking the suitability of products for their intended use.