

PRODUCT DATA SHEET

SikaInject®-633

Solvent-free, low viscosity, hydrophilic grout for rock injection and consolidation of sandy and silty strata

DESCRIPTION

SikaInject®-633 is a solvent-free, non-foaming, hydrophilic, one-component injection system, based on a nanometric colloidal silica suspension of primary, discrete particles.

USES

SikaInject®-633 may only be used by experienced professionals.

Pre-injection (pre-excavation grouting)

Post injection

Water ingress reduction

Slope stabilization

Ground improvement: • Permeability reduction •

Strength increase • Stabilisation of fluvial sands and

silts • Reducing risk of liquefaction

Low pressure permeation grouting of granular materi-

als: • TBM launching and reception shafts • Preinjec-

tion prior to X-passage excavation • Toe grouting and

curtain grouting of ERS • Plug grouting of shafts and

boxes • TAM (Sleeve) grouting with double packers •

Lance Grouting

CHARACTERISTICS / ADVANTAGES

- Very low viscosity
- Excellent permeation at low pressure
- Solvent-free
- non-aggressive = provides improved working safety
- No environmental impact
- Good bonding to wet surfaces
- Controlled, adjustable gel times (accelerator)
- Simple mixing and pumping equipment can be used (as cementitious grouts)

PRODUCT INFORMATION

Packaging	1000L, IBC (SikaInject®-633) 1000L, IBC (SikaInject®-633 AC) Other sizes on request
Colour	Clear to opaque (SikaInject®-633) Clear (SikaInject®-633 AC) Whitish/clear (mixed)
Shelf Life	12 months
Storage Conditions	Store unopened, tightly closed in original containers. Keep dry and within a temperature range of +5 to +35 °C. Protect from frost and sunlight.

Density	~1.20 kg/l (20°C, AP-005, SikalInject®-633) ~1.07 kg/l (20°C, AP-005, SikalInject®-633 AC) ~1.20 kg/l (20°C, AP-005, mixed)
pH-Value	~8.8 -10.0 (20°C, AP-009, SikalInject®-633) ~7 (20°C, AP-009, SikalInject®-633 AC) ~9 (20°C, AP-009, mixed, depends on ratio)
Viscosity	< 12 mPas (20°C, SikalInject®-633) ~1 mPas (20°C, SikalInject®-633 AC) ~5 mPas (20°C, mixed)
Solid Content by Weight	30 ± 1% (SiO ₂ concentration, SikalInject®-633)

APPLICATION INFORMATION

Gel time	<p>The gel time of the SikalInject-633 can be finely controlled by adjusting the SikalInject-633 AC dosage, gel times starting from minutes to many hours are possible. As the gel time is affected by temperature on-site testing should be conducted under representative conditions.</p> <p>This exemplary mixing chart helps to keep the SiO₂ content stable and adjust only the speed of the reaction</p>					
	Exemplary mix	Mix 1	Mix 2	Mix 3	-	Mix 10.
	SikalInject-633	150	150	150	150	150
	SikalInject-633 AC	50	49	48	X	41
	Water	0	1	2	Y	9
	Total Mass	200	200	200	200	200
	Total SiO ₂ Solids	22.5%	22.5%	22.5%	22.5%	22.5%

BASIS OF PRODUCT DATA

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet (MSDS) containing physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

APPLICATION

- Low intensity mixers / agitators should be used to blend the two components.
- Always add the accelerator at the required ratio to the product, not the other way around.
- Add the accelerator SikalInject®-633AC to SikalInject®-633 at the required ratio.
- Ensure SikalInject®-633 is continuously stirred during the addition of the accelerator, and fully pre-mixed prior to pumping.
- The mixture is workable between +5°C and +40°C.
- Pump with a 1-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.
- SikalInject®-633 and its accelerator can also be injected using a 2-component pump.
- In this case, a static in-line mixer is necessary to achieve a good mixing of the two components.
- To achieve controlled, targeted injection into sands and gravels, it is advised to use double packers with in 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.

CLEANING OF TOOLS

All equipment can be cleaned with fresh water

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

LEGAL NOTES

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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Product Data Sheet

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