KÖSTER
Waterproofing Systems

KÖSTER Geofoam

Technical Data Sheet IN 293

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IN - Injection systems

2 Comp. PU water stopper, soil stabiliser and void filler

Features
KÖSTER Geofoam is a two-component polyurethane foam with low viscosity, exceptionally high mechanical stability and hydrophobic properties. The KÖSTER Geofoam was developed for soil stabilization in mining and tunnel construction, for filling cavity structures and for stopping water ingress. No water is required for the reaction of the mixed components.
By adding the KÖSTER Geofoam Accelerator, the reaction time can be considerably accelerated, for example to stop acute water ingress with the help of injections into the substrate.

Technical Data

Viscosity comp. A	approx. 200 mPa.s
Viscosity comp. B	approx. 300 mPa.s
Density comp. A	approx. 1.1 g/cm³
Density comp. B	approx. 1.25 g/cm³
Mixing ratio by weight	1:1.2 (A:B)
Mixing ratio by volume	1:1 (A:B)
Type of foam	*
Reaction KÖSTER Geofoam	
Start of reaction	aprrox. 30 sec
Full reaction time	approx. 150 sec
Tack-free	approx. 200 sec
Expansion	1:20
Reaction KÖSTER Geofoam + 10 % accelerator	
Start of reaction	approx. 20 sec
Full reaction time	approx. 110 sec
Tack-free	approx. 160 sec
Expansion	1:25

*Foam is non-porous and features a closed-cell structure that becomes hard, thick, and robust, forming a uniform, homogeneous composition.

Fields of Application
For waterproofing against water outbreaks, for soil stabilization of soil layers and rock structures, e.g. in mining or tunnel construction, for filling backfilling of cavity structures with / without counter pressure.

Application
The application is carried out with a 2-component injection pump. The material is first combined in the mixing head and then injected into the components/substrates to be consolidated using a suitable packer system (drill hole closures, inflatable packers or conventional packers) at pressures adapted to the application. The flow rate and pressure build-up show the degree of filling and can vary greatly depending on the nature of the injection area.
In the optimum case, the components are mixed at a temperature of +15 °C in order to achieve reaction times of a few minutes. Warmer mixtures react too quickly and prevent deeper penetration of the injection area. Colder mixtures can promote side reactions with water and lead to less stable reaction products.
To accelerate the material, KÖSTER Geofoam Accelerator is added in the required quantity to the A-component of KÖSTER Geofoam. The dosage should be tested on a small amount of geofoam in order to adapt the reaction time to the local climatic conditions. For further information see technical data sheet KÖSTER Geofoam Accelerator.

Injection is generally carried out in one stage until the injection area is saturated with the highest possible flow rate and a corresponding adjustment of the injection pressure. The packer characteristics must be observed with regard to the pressures used.

Consumption
approx. 1.1 kg/l (confined space); approx. 50-100 g/l (unrestricted)
approx. 50 - 100 g/l cavity (freely expanded)

Cleaning
Immediately after use with KÖSTER PUR cleaner.
The injection head must be rinsed with KÖSTER PUR Cleaner before breaks in work or after injection, before the reaction time of the mixed components begins. The rinsing residues must be collected in a waste container and taken to a suitable disposal point.

Packaging

IN 293 020	20 kg combipackage; A component 9.13 kg | B component 10.87 kg

Storage
The storage time is a minimum of 6 months in the original sealed containers. The containers must be stored in a dry and cool place. After partial withdrawals immediately reseal the containers (do not mix up the container closures) and turn once "upside down" to seal the closures from the inside.

Safety
Contains diisocyanate. For the use of this product is according to EU chemicals legislation (REACH), Regulation1907/2006,AnnexXVII from August 24, 2023, a training course for commercial andindustrial users on the safe use of diisocyanates is mandatory. Training documents can be found at https://safeusediisocyanates.eu/ can be downloaded. Arm and leg covering arm and leg covering work clothing or a protective suit must be worn. When work in confined spaces or in the "overhead area", hoods must be worn. Wear suitable protective gloves (e.g. nitrile gloves) and safety goggles. In general, contact with skin, eyes and mucous membranes should be avoided. Eating and smoking in the vicinity of the injection system is prohibited. The application area must be kept clean. Soiled clothing must be changed immediately and the affected clean the affected areas of skin with suitable products. After eye contact, consult a doctor and carry the safety data sheet with you. Legal regulations and local safety instructions must be followed.

Related products

KÖSTER Geofoam Accelerator	Prod. code IN 793 002
KÖSTER PUR Cleaner	Prod. code IN 900

The information contained in this technical data sheet is based on the results of our research and on our practical experience in the field. All given test data are average values which have been obtained under defined conditions. The proper and thereby effective and successful application of our products is not subject to our control. The installer is responsible for the correct application under consideration of the specific conditions of the construction site and for the final results of the construction process. This may require adjustments to the recommendations given here for standard cases. Specifications made by our employees or representatives which exceed the specifications contained in this technical guideline require written confirmation. The valid standards for testing and installation, technical guidelines, and acknowledged rules of technology have to be adhered to at all times. The warranty can and is therefore only applied to the quality of our products within the scope of our terms and conditions, not however, for their effective and successful application. This guideline has been technically revised; all previous versions are invalid.

KÖSTER BAUCHEMIE AG • Dieselstraße 1-10 • D-26607 Aurich • Tel. 04941/9709-0 • info@koester.eu • www.koester.eu