

PRODUCT DATA SHEET

Sika® Stabilizer-3710 TBM

Strong thickener for soil conditioning in EPB TBMs

PRODUCT DESCRIPTION

Sika® Stabilizer-3710 TBM is a strong, liquid polymer for use in EPB TBM applications that works as a binding agent. It restructures heterogeneous soils with poor grading and low fines content, absorbs excess ground water and increases soil plasticity and cohesion. This helps to improve the balance of pressure in the working chamber, leading to better ground stability and soil extraction.

WHERE TO USE

Sika® Stabilizer-3710 TBM can be used in the following applications, but no limited to:

- Enhancing the performance of foaming agents in difficult ground conditions, such as in coarse, heterogeneous soil with low fine content, or saturated soil with high water pressure.
- Sealing the excavation face during hyperbaric interventions in combination with the injection of bentonite or filler slurries.

CHARACTERISTICS / ADVANTAGES

Sika® Stabilizer-3710 TBM provides the following characteristics and benefits:

- Particularly effective in saturated grounds with low fines content
- Particularly effective in coarse, clean sands and gravels below groundwater
- Increases the cohesion of coarse sands and gravels
- Drying agent for muck management: highly effective solidifying agent that converts excavated muck into plastic, deformable solids in a matter of minutes at extremely low dosages, both on the conveyor belt and at the muck pit
- Reduces soil permeability very quickly
- Polymer to reduce ground-TBM shield friction: reduces friction between ground and TBM shields when pumped together with a bentonite-based slurry
- Creates plastic deformation properties in the soil, which increases face stability
- Can be used as a lubricant for pipe jacking.
- Ready for use: no mixing required

PRODUCT INFORMATION

Composition / Manufacturing	Modified anionic polyacrylamide	
Packaging	Intermediate Bulk Container (IBC)	1040 kg
	Drum	204 kg
Colour	White	
Appearance / Colour	Liquid, white	
Shelf Life	6 months from date of production	
Storage Conditions	Product must be stored in original, unopened and undamaged sealed packaging in dry conditions at temperatures between 5 °C and 35 °C. Always	

refer to the packaging. Do not allow to freeze. Refer to the current Safety Data Sheet for information on safe handling and storage.

Density	1.050 ± 0.05 kg/L	(EN ISO 2811-1)
Solubility	Soluble in water	

APPLICATION INFORMATION

Recommended Dosage	The appropriate dosage of Sika® Stabilizer-3710 TBM is between 0.05 - 2.0 % by weight of soil. The consumption depends on the following parameters: ▪ Type of soil ▪ Amount of groundwater entering the excavation chamber ▪ TBM excavation mode ▪ TBM penetration rate ▪ TBM overburden Contact Sika Technical Services for additional information.
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SYSTEMS

Compatibility	Compatible with Sika® admixtures and other Sika® products. Contact Sika Technical Services for additional information.
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BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

ENVIRONMENT, HEALTH & SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

APPLICATION INSTRUCTIONS

APPLICATION

WHEN USED AS A THICKENER FOR SOIL CONDITIONING

- Inject Sika® Stabilizer-3710 TBM directly into the excavation chamber in controlled dosing steps. Begin with a low dosage and gradually increase it according to the soil's response and the pressure readings.

WHEN USED AS A SOLIDIFYING AGENT

- Inject Sika® Stabilizer-3710 TBM directly onto the muck being transported on the conveyor belt.
- Evaluate and adapt the choice of spraying system (nozzle types and use of compressed air) according to the need and application rate, to harmonize flows.
- When applying Sika® Stabilizer-3710 TBM by spraying, distribute it in several nozzles arranged along the

conveyor belt, especially along the transfer points between belts. Tumbling the material will help in the mixing and homogenization process between the slurry and Sika® Stabilizer-3710 TBM.

- Due to its extremely hydrophilic properties, continuous use of Sika® Stabilizer-3710 TBM reduces the risk of clogging in the spraying system. If clogging occurs after long periods of inactivity, apply a water and/or air flush, which should be sufficient to unblock the system.
- If long stops are planned during excavation operations for maintenance or other reasons, clean the spraying system thoroughly with air and/or water.

WHEN USED AS A POLYMER TO REDUCE FRICTION

- Inject Sika® Stabilizer-3710 TBM into the space between the ground and the shields to facilitate smoother tunnel advancement while improving shield preservation in highly abrasive ground conditions.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

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 recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. 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 or may be downloaded from our website at: www.sika.ca

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Product Data Sheet

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