

PRODUCT DATA SHEET

Sika® Stabilizer-4001 TBM AE

Sodium Bentonite for Backfill Grout Mixes in TBM Applications

DESCRIPTION

Sika® Stabilizer-4001 TBM AE is a high yield bentonite designed for use in the annular grouts that are injected behind the tunnel segments in TBM projects. Its special characteristics in enhancing lubrication, thixotropy, and control of bleeding make the product ideal for the annular grouts.

USES

Sika® Stabilizer-4001 TBM AE is the recommended solution for TBM projects where high stability of the annular grouts is required.

FEATURES

- Improves bleeding, flowability and segregation of Component A
- Ensures Component A stability over long-distance pumping
- Helps the gelling process, conferring higher homogeneity and impermeability of the final grout
- Ensures high level of lubrication and reduced permeability of the annular grouts.
- Increases homogeneity of backfill grout
- Chemically stable
- Easy to mix with water and the other constituents of the mix design.

PRODUCT INFORMATION

Packaging	25 kg bag, 50 kg or ~1 tonne bag
Shelf life	12 months from date of production
Storage conditions	The product must be stored in dry area protected from exposure to moisture at temperature between +5 °C and +50 °C. A loss of rheological and swelling properties may result if the product is not stored as recommended.
Appearance and colour	Light brown powder
Bulk density	0.88 – 0.95 g/cm ³ (+25 °C)
Specific gravity	2.3 – 2.5

APPLICATION INFORMATION

Recommended dosage	Sika® Stabilizer-4001 TBM AE is mixed in fresh water with a typical 35 – 45 kg/m ³ dosage for annular grout for TBM applications, depending on project's technical requirements and mixing procedures.
Compatibility	Compatible with: <ul style="list-style-type: none">▪ All cement types in the industry▪ Fresh water with low to medium hardness▪ All Sika Admixtures like retarders/stabilizers and accelerators. Contact Sika Technical Services for additional information.

BASIS OF PRODUCT DATA

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

IMPORTANT CONSIDERATIONS

- Swelling: 11 – 13 ml/g
- Moisture content: 10 – 14 %

ECOLOGY, HEALTH AND 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

To ensure enhanced performance with cement and admixtures, it is recommended that Sika® Stabilizer-4001 TBM AE product be pre-hydrated for at least 4 hours before using.

To ensure proper hydration of Sika® Stabilizer-4001 TBM AE, it is necessary to mix with high shear to ensure the required turbulence.

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 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.

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ISO 9001, 14001, 45001 – SGS
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ISO 9001, 14001 – SGS
- Sika Saudi Arabia Limited
ISO 9001, 14001 – TÜV
- Sika MB Construction Chemicals LLC
- Sika Construction Chemicals for Manufacturing LLC
- Master Builders Solutions LLC

All products are supplied under a management system certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and ISO 45001.



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