

PRODUCT DATA SHEET

Sika® Stabilizer-5015 TBM CN

STABILIZING ADMIXTURE WITH SET RETARDING PROPERTIES FOR USE IN ANNULAR GROUT MIXES FOR TBM TUNNELING.

DESCRIPTION

Sika® Stabilizer-5015 TBM CN is a powerful liquid plasticizer which disperses and deflocculates cement particles whilst delaying the hydration process, thereby retarding the initial and final set. It can be used to improve fluidity without the addition of extra water, or to allow reductions in the free water content. Due to improved dispersion of the cement particles the process of hydration proceeds under the optimum conditions, leading to improved strength characteristics with or without reduction in free water.

USES

- High flow, low cement content, high W/C ratio annular grout mixes for TBM tunneling.
- Hot weather applications of grout where control of initial and final set is important.

Setting control grout mixes for injection into the annular void behind segmental tunnel linings. Sika® Stabilizer-5015 TBM CN is designed for use in one or two component grouting systems and is compatible with accelerators.

CHARACTERISTICS / ADVANTAGES

- Increases the compressive, tensile, and flexural strength of grout.
- Increases density of grout mixes reducing permeability and thus increasing durability.
- Allows a reduction in free water in the region of 5-12%.
- Highly effective in low cement content high water cement ratio mixes where its use enables grout to be made more workable without loss in strength, density, and durability.
- Enables controlled extension of initial set.
- The retarding action allows storage of the annular grout in the pumping lines and grout agitator tanks on the TBM for up to 72 hours depending on dosage.
- The strength gain of annular grouts containing Sika® Stabilizer-5015 TBM CN is enhanced. After retardation of initial and final set, a more rapid hardening of the grout occurs.

APPROVALS / STANDARDS

EN 934-2 Tables 6 and 10
ASTM C494: Type B & D

PRODUCT INFORMATION

Packaging	1000 litre IBCs or 210 litre drums.
Shelf life	The shelf-life of the product is 6 months in unopened original packing.
Storage conditions	Store in sealed containers or storage tanks to protect from extremes of temperature.
Appearance / Colour	Dark brown liquid
Density	1.2 - 1.3 kg/L
Solid content by weight	50 – 52%

TECHNICAL INFORMATION

Specific Advice

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult Sika Technical Services Department.

APPLICATION INFORMATION

Recommended Dosage

Field trials should be conducted to determine the optimum addition rates of Sika® Stabilizer-5015 TBM CN. As a guide to these trials, a dosage range of 750 to 1500ml per 100 kg of cement should be adequate.

DISPENSING

Sika® Stabilizer-5015 TBM CN should be dispensed through a proprietary dispenser.

Sika® Stabilizer-5015 TBM CN should be added to the annular grout mix during the mixing cycle, at the same time as the water, or the bentonite. Never add Sika® Stabilizer-5015 TBM CN to the dry cement. No extension to normal mixing time is necessary.

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.

IMPORTANT CONSIDERATION

Never add Sika® Stabilizer-5015 TBM CN to the dry cement.

A severe over dosage of Sika® Stabilizer-5015 TBM CN will result in:

- Increased retardation of initial and final set.
- Increase in workability.

Providing annular grout is properly cured the ultimate strength of the grout will not be adversely affected.

Care should be taken to allow for the effect on injection pressures and advance rates.

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.

LOCAL RESTRICTIONS

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

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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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