

## PRODUCT DATA SHEET

# Sika® Stabilizer-2231 TBM

Fire-resistant tail sealant grease for shielded TBMs

### DESCRIPTION

Sika® Stabilizer-2231 TBM is a fire-resistant tail sealant grease used for the protection of the metal brushes. It efficiently seals the brush chambers and the gap between the TBM tail shield and concrete segments against the ingress of groundwater, backfill grout, and soil in the machine.

It is specifically formulated to resist water and grout pressures as well as breakdown under high mechanical pressure. It has very good pumping properties and adheres well to all types of metal and concrete surfaces.

### USES

Sika® Stabilizer-2231 TBM is used for:

- Sealing the brush chambers and the gap between the TBM tail shield and concrete segments against the ingress of groundwater, backfill grout and soil in the machine.

### CHARACTERISTICS / ADVANTAGES

- Low density reduces consumption compared to traditional greases
- Pumping properties and cohesion easily adaptable to any TBM grease pumping
- Compatible with gaskets, metals and concrete, even wet
- Compatible with all plunger pumps and pumping systems in TBMs
- Packaging is largely made from recycled materials
- Lower pump pressure in the TBM
- Fire-resistant, no propagation of flames when exposed to sparks or direct flames
- Improved consistency
- Sealing ability under pressure
- Adhesion to metal and concrete surfaces, also when wet
- Enhanced washout resistance
- Non-miscible with annulus grout
- Easy to control with modern PLC in TBM

### PRODUCT INFORMATION

<b>Packaging</b>	Drum	260 kg for press plate pumps
<b>Shelf Life</b>	12 months from date of production	
<b>Storage Conditions</b>	The 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. Refer to the current Safety Data Sheet for information on safe handling and storage.	
<b>Appearance / Colour</b>	Homogeneous paste, light beige	
<b>Density</b>	~(1.30 - 1.420) kg/L	(EN ISO 2811-1)
<b>Solubility</b>	Non-soluble in water	
<b>Consistency</b>	Tested at +20 °C	215 ± 10 (ASTM D217)

# TECHNICAL INFORMATION

Specific Advice	Matsumura sealing test	34 bar (passed)
	Load hysteresis value (at 10mm)	2.5 N
	Sliding on metal surface (dropping time)	> 45 min
	Water spray-off test	< 7%

## SYSTEM INFORMATION

**Compatibility** Compatible with Sika® admixtures and other Sika® products. Contact Sika Technical Services for additional information.

## APPLICATION INFORMATION

**Consumption** Average consumption is 0.7 - 1.2 kg/m<sup>2</sup> of external surfaced of the tunnel concrete segments. Consumption strongly depends on site conditions during TBM excavation such as:

- Surface roughness of tunnel segments
- Conditions of the brushes.
- Quality of alignment of installed segments
- Direction and gradient of the tunnel
- Air trapped inside the pumping system
- Backfill grout pressure

Contact Sika Technical Services for additional information.

## 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 Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

## APPLICATION INSTRUCTIONS

### APPLICATION

1. **IMPORTANT:** Avoid discharged of the Product into the environment. Pump the product using the tail sealant grease pumping system in the TBM
2. Inject the product in the brush chambers located between the tail-shield and the tunnel lining.

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## 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.

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