

PRODUCT DATA SHEET

Sika® Stabilizer-2231 TBM

FIRE-RESISTANT TAIL SEALANT GREASE FOR SHIELDED TBMs (TUNNEL BORING MACHINE)

PRODUCT 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 Tunnel Boring Machine (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

- 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

Packaging	573 lb drum (260 kg) 143 lb drum (65 kg)
Shelf Life	12 months from date of production
Storage Conditions	The product must be stored in original, unopened and undamaged packaging in dry conditions at temperatures between 41°F - 95°F (5 °C - 35 °C) Always refer to packaging and current Safety Data Sheet for information on safe handling and storage
Appearance / Color	Light Beige Homogeneous Paste
Density	Approx. 1.37
Solubility	Non-soluble in water
Consistency	ASTM D217
	Temp 68 °F (20 °C) 0.85" (21.5 ± 1.0 mm)

TECHNICAL INFORMATION

Specific Advice		
	Matsumura Sealing Test (Standard at 34 bar)	PASSED
	Load Hysteresis Value (at 10mm)	2.5 N
	Sliding on metal surface (dropping time)	> 45 min
		ASTM D4049
	Water spray-off test	< 7%

APPLICATION INFORMATION

Coverage	<p>The correct consumption must be determined by <u>preliminary testing</u>. Pre-trials should be executed to confirm correct consumption with the equipment that is intended to be used. Average consumption is 0.14–0.25 lb/ft² (0.7–1.2 kg/m²) of external surfaces of the tunnel concrete segments. Consumption strongly depends on site conditions during TBM excavation such as:</p> <ul style="list-style-type: none">▪ 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 <p>Contact your Sika STM Technical Representative for additional information.</p>
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BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

IMPORTANT Avoid discharge of the Product into the environment.

1. 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.

Contact your Sika STM Technical Representative for more information.

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

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Product Data Sheet

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