

MasterRoc[®] TSG 7

Tail Sealant for Shielded Tunnel Boring Machines (TBM)

Description

MasterRoc TSG 7 tail-shield sealant is used for shielded tunnel boring machines (TBMs). MasterRoc TSG 7 sealant effectively seals the gap between the shield and concrete segments to prevent the ingress of soil, water or grout.

MasterRoc TSG 7 sealant is formulated as a “first fill” product to resist water and ground pressures and not break down under high mechanical pressures. After the initial “first fill” application, the use of MasterRoc TSG 6 sealant is recommended to ensure effective TBM tail shield protection. MasterRoc TSG 7 sealant has excellent pumping properties and adhesion on most surfaces.

Applications

Recommended for use in:

- Tunneling with shielded TBMs

Features

- Excellent pumping properties
- Excellent sealing properties
- Adheres to most metal or concrete surface
- Very high washout resistance
- Non-miscible with annulus grout

Benefits

- Prevents the ingress of soil, water or grout into shielded TBMs

Performance Characteristics

Consumption: The average consumption for filling a 3 row brush system is 50 kg per meter (34 lb per ft) shield circumference.

Technical Data

Form	Homogeneous Paste
Color	Light Grey
Smell	Slight Odor
Density at 72.5 °F (22.5 °C)	111.7 lb/ft ³ (1.79 g/cm ³)
Consistency (ASTM D217), in. (1/10 mm)	0.79 (200)
Matsumara sealing test	493 psi (34 bar) – Passed
Water spray off test (ASTM D4049), % Mass loss	< 5%
Load Hysteresis Value (N @ 10mm penetration)	6.0
Sliding on metal surface (Dropping time), min	> 45
Soluble in water	No

Guidelines for Use

MasterRoc TSG 7 sealant is designed for use in a wide range of application temperatures.



Storage and Handling

Storage Temperature: MasterRoc TSG 7 sealant should be stored in unopened, original containers, preferably at 41 to 95 °F (5 to 35 °C).

Shelf Life: MasterRoc TSG 7 sealant has a minimum shelf life of 12 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterRoc TSG 7 sealant has been exceeded.

Safety: MasterRoc TSG 7 sealant is an inert material and is not hazardous. MasterRoc TSG 7 sealant is ecologically and environmentally preferable and poses no threat to worker safety. However, it is recommended that all normal precautions be taken when handling the product, such as use of eye protection and gloves. Refer to the Safety Data Sheet for MasterRoc TSG 7 sealant for more information.

MasterRoc TSG 7 sealant has passed a risk assessment indicating that the leachable components of the sealant are biodegradable.

Packaging

MasterRoc TSG 7 sealant is packaged in 154 lb (70 kg) and 550 lb (250 kg) drums.

Related Documents

Safety Data Sheets: MasterRoc TSG 7 sealant

Additional Information

For additional information on MasterRoc TSG 7 sealant, contact your local sales representative.

Master Builders Solutions creates technologies for the construction industry inspiring people to build better. We are active in ~40 countries and operate 35 production sites with over 1,600 employees. We develop, produce, and market high-quality chemical admixtures, as well as adjacent core technologies, to master the challenges of today and support a decarbonized future. Our people are pivotal and pair leading technologies and a strong brand heritage to surpass our customers' expectations and drive continuous value creation.

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