

MasterRoc[®] TSG 800

Fire Resistant Tail Shield Sealant for Shielded Tunnel Boring Machines (TBM)

Material Description

MasterRoc TSG 800 is our new fire-resistant tail sealant used for the protection of the wire brushes, to efficiently seal the gap between the TBM Tail Shield and the concrete segments to prevent the ingress of water, grout, and soil in the machine. It is specifically formulated to resist water and grout pressures; it will not break down under high mechanical pressure. It has excellent pumping properties and has excellent adhesion to all types of surfaces.

Areas of Application

Tunneling with shielded mechanized tunnel boring machines (TBMs) equipped with a tail seal brush system.

Characteristics and Benefits

Operational

- Reduced consumption due to lower density
- Excellent pumping properties and cohesion
- Compatible with gaskets, metals, and concrete
- Improved in packaging to allow easier recycling
- Lower pump pressure in TBM

Technical

- Fire-resistant, no propagation of flames when exposed to sparks or direct flames
- Excellent consistency and sealing properties
- Proper adhesion to any metal or concrete surfaces
- Very high washout resistance
- It distributes correctly in the chambers between the rows of brushes for a good seal
- Non-miscible with annulus grout

Packaging

MasterRoc TSG 800 is available in standard 260 kg steel drums, 20kg or 65kg pails for press plate pumps. PE lined drums are also available to facilitate recycling and minimize wastage.

Technical Data

Form	Homogeneous paste
Color	Light beige

Odor	Slight odor
Density [g/cm ³] @22.5°C	1.37
Consistency; ASTM D 217 [1/10 mm]	215
Matsumura sealing test	34 bar passed
Load Hysteresis Value [N @ 10mm]	2.5
Sliding on metal surface [min] (dropping time)	>45
Water Spray Off Test	<7%
Soluble on water	No

MasterRoc TSG 800 exhibits:

- Anti washout properties
- Excellent adhesion to all metal and concrete surfaces
- Easy pumpability
- Technical soundness and cost saving

Consumption

Typical consumption rate ranges between 0.7 and 1.2 kg/m² of segment outer surface area; however, this is a range of values subject to numerous factors.

Consumption rates depends on several factors such as segment ring surface conditions, degree of curvature of tunnel drives, tail seal brush conditions, grouting pressures, and slurry pressures.

Storage

MasterRoc TSG 800 should be stored at 5 - 35°C. Stored in original tightly closed drums it has a shelf life of up to 12 months.

Precautions

MasterRoc TSG 800 is an inert grease and is not hazardous. Standard precautions for handling chemical products should be observed. Avoid eye and skin con-tact and wear rubber gloves and safety glasses. For further information, refer to the Material Safety Data Sheet which you can obtain from our local Master Builders Solutions representative.

Ecological Information

MasterRoc TSG 800 is not in direct contact with the natural surfaces; therefore, no environmental emissions are expected



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during the application of the product. A potential emission to the environment is thus only dependent on the water fluxes through the grout.

MasterRoc TSG 800 is ecologically and environmentally friendly and poses no threat to worker safety or the environment.

MasterRoc TSG 800 has passed a risk assessment indicating that leachable components are biodegradable, keeping pace with environmental regulations.

Product Disposal Information

Deliberate discharge of the product into the environment must be avoided.

Disclaimer

The information given here is true, represents our best knowledge and is based not only on laboratory work but also on field experience. However, because of numerous factors affecting results, we offer this information without guarantee and no patent liability is assumed. For additional information or questions, please contact your local representative.

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