

MasterRoc[®] TSG 6

Tail sealant for shielded tunnel boring machines (TBM)

DESCRIPTION

MasterRoc TSG 6 is a tail sealant for shielded tunnel boring machines equipped with brushes system. It effectively seals the gap between the shield and concrete segments to prevent the ingress of water, grout and soil in the machine.

It is formulated to resist high water and ground pressures and has excellent pumping properties and adhesion to all types of surfaces.

TYPICAL APPLICATIONS

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

OPERATIONAL BENEFITS

- Excellent pumping properties and cohesion
- Compatible with gaskets, metals and concrete
- Improved in packaging to allow easier recycling

ADVANTAGES

- Excellent sealing properties
- Excellent adhesion to any metal or concrete surfaces
- Excellent pumping properties
- Non-miscible with annulus grout

PACKAGING

MasterRoc TSG 6 is available in standard 70kg or 250kg steel drums for press plate pumps.

TYPICAL PROPERTIES*

Form	Homogeneous paste
Colour	Beige
Odour	Slight odour
Density @ 22.5°C	1620 kg/m ³
Consistency; ASTM D 217 (1/10 mm)	225
Matsumura sealing test	34 bar
Load hysteresis value @10mm	3.0 N
Sliding on metal surface (dropping time)	>15 min
Water spray off ASTM D 4049-16	< 5%
Soluble on water	No

CONSUMPTION

The typical consumption rate varies between 0.8 and 1.5 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.

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STORAGE AND SHELF LIFE

MasterRoc TSG 6 should be stored at 5 - 35°C. If stored in original tightly closed drums it has a shelf life of 12 months.

PRODUCT DISPOSAL INFORMATION

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

ECOLOGICAL INFORMATION

MasterRoc TSG 6 is not in direct contact with the natural surfaces; therefore, no environmental emissions are expected 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 6 is ecologically and environmentally friendly and poses no threat to worker safety or the environment.

MasterRoc TSG 6 has passed a risk assessment indicating that leachable components are biodegradable, keeping pace with environmental regulations.

HEALTH AND SAFETY

MasterRoc TSG 6 is an inert material and is not hazardous. It is ecologically and environmentally friendly and poses no threat to worker safety or the environment. However, it is recommended that all normal precautions be taken when handling the product, such as the use of eye protection and gloves.

* Properties listed are based on laboratory controlled tests.

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