# MasterRoc® TSG 6

Tail Sealant for Shielded Tunnel Boring Machines (TBM)

## Material Description

**MasterRoc® TSG 6** is a tail sealant for shielded tunnel boring machines. It effectively seals the gap between the shield and concrete segments to prevent the ingress of water, grout and soil. It is formulated to resist high water and ground pressures, and has excellent pumping properties and 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**

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

**Technical**

- Fire-resistant, no propagation of flames when exposed to sparks or direct flames
- Excellent sealing properties
- Excellent adhesion to any metal or concrete surfaces
- Excellent pumping properties
- Non-miscible with annulus grout

## 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.

## Consumption

Typical consumption rate ranges between 0.8 and 1.5 kg/m$^2$ 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.

| Technical Properties | |
|---|---|
| Form | Homogeneous Paste |
| Color | Beige |
| Specific Gravity (22.5°C) | 1.62 g/cm$^3$ |
| Odor | Slight odor |
| Consistency (ASTM D 217) (1/10 mm) | 225 |
| Matsumura Sealing Test | 34 bar passed |
| Load Hysteresis Value (N 10 mm) | 3.0 |
| Sliding on Metal Surface (min.) (dropping time) | >15 |
| Water Spray Off Test (ASTM D4049-16) | <5 % |
| Soluble on Water | No |

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## Precautions

**MasterRoc® TSG 6** 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.

## Product Disposal Information

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

## Packaging

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

## Storage and Shelf Life

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

## Health and Safety

For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapor until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

## Disclaimer

The technical information given in this publication is based on the present state of our best scientific and practical knowledge. **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is only responsible for the quality of the product **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones.

## Contact

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