

MasterRoc[®] SLF 41

Polymer modified foaming agent for heterogeneous grounds with variable range of permeability, readily biodegradable for Tunnel Boring Machines (TBM) applications

Material Description

MasterRoc SLF 41 is a foaming agent especially designed for soil conditioning in soft ground conditions, sandy soils with high water inflows.

MasterRoc SLF 41 guarantees improved rheology of the excavated soil, face stability and facilitates extraction from outside the excavation chamber.

MasterRoc SLF 41 is an eco-friendly foaming agent, based on readily biodegradable raw materials.

Areas of Application

MasterRoc SLF 41 is designed for sandy soils with high amount of water in any kind of environments, since it remains stable and homogeneous also when the temperature drops.

MasterRoc SLF 41 can be used with the standard foam generators installed in all EPB machines. It can be injected at the cutterhead to the front, into the TBM working chamber and in the screw conveyor.

Characteristics and Benefits

- Ensured face excavation support pressure and control
- Improved TBM excavation cycle's time, quality and cost
- Facilitated muck extraction from tunnel and from the muck pit area
- Improved overall tunnel performance
- Reduced tunnel excavation time
- Reduced TBM maintenance costs
- Optimized muck logistics outside job site
- Minimized over excavation and contractual disputes
- Reduced risk of surface settlement

Technical benefits

- Improved soil behavior
- Reduced soil permeability
- Creation of plastic deformation properties in the soil, which increases extraction
- Lower inner friction and lower abrasiveness of the soil at the cutterhead and shield

Packaging

MasterRoc SLF 41 is available in standard 1000 Liters IBCs and bulk.

Technical Data

Form	Liquid
Color	Transparent
Density (g/cm ³ at 20°C)	1.04
Solubility in water	Total

MasterRoc SLF 41 exhibits:

- High foamability
- High Half Life Drainage Time (HLT)
- Very high mechanical resistance and strength

Application Procedure

MasterRoc SLF 41 is used as aqueous solution with a typical 1 % - 3 % concentration.

Easily injectable by any standard foam generator installed in TBM EPB machines.

If the consistency of the muck needs to be reduced, MasterRoc SWA and SLP polymers can be used in combination with MasterRoc SLF 41.

For the first use and combination with other soil conditioning agents, please contact your local Master Builders Solutions representative.

Dosing System

MasterRoc SLF 41 can be used with the standard TBM dosing and foaming equipment.

Storage

MasterRoc SLF 41 must be stored between 5°C and 40°C. At low temperatures the product can become slightly turbid, but this doesn't affect the performance once remixed and homogenized as the formulation is chemically reversible.

Do not allow the product to freeze. If stored in original tightly closed containers, it will have a shelf life of 12 months.

Precautions

Standard precautions for handling chemical products should be followed. Avoid eye and skin contact and wear rubber gloves and safety glasses.



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For further information, refer to the Material Safety Data Sheet which you can obtain from our local Master Builders Solutions representative.

Ecological Information

MasterRoc 41 is eco-friendly and highly biodegradable as per international standards. Please consult Master Builders Solutions Material Safety Data Sheet.

Product Disposal Information

Deposition of excavated material conditioned with MasterRoc SLF 41 on a landfill for inert materials as per the Council Directive 1999/31/EC dated 26.04.1999 on the landfill of waste (OJ L 182, 16.07.1999) shall be possible in any case.

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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