

MasterRoc[®] SLF 41

Soil conditioning foam for Tunnel Boring Machines (TBM)

Product description

MasterRoc SLF 41 is a polymer reinforced foaming agent especially designed for soil conditioning in shielded tunnel boring machines.

Fields of application

- Soft ground tunneling
- Designed for silt to sand soils which may contain a high amount of water

Features and benefits

- Improved soil behavior.
- Easier 'mucking'.
- Reduced soil permeability.
- Creation of plastic deformation properties in the soil, which provides an even and controlled support pressure and increased face stability.
- Lower inner friction and lower abrasiveness of the soil at the cutterhead.
- Reduced stickiness of certain soils, which would lead otherwise to blockage problems.

Packaging

MasterRoc SLF 41 is available in standard 1000 liter IBCs.

Technical data

Form	Liquid
Color	Transparent
Density [kg/m³; 20°C]	1035 - 1045
pH (3% solution) 20°C	6.5 - 7.5
Solubility in water	Total

Application procedure

An aqueous solution of MasterRoc SLF 41 can be expanded with air to produce a stable foam. The foam expansion and the foam injection rate onto the face, into the working chamber or screw conveyor depends on soil conditions encountered.

Consumption

Typically, MasterRoc SLF 41 is used at 2 to 3% (range 2 – 6%) in water to make a solution. MasterRoc SLP 1 or MasterRoc SLP 2 polymers (see separate data sheets) can be jointly used with MasterRoc SLF 41 to strengthen the foam or to adjust the properties of the excavated soil. For the first use and combination with other soil conditioning agents, please contact your local representative.

Foam equipment

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

Handling

Do not mix pure MasterRoc SLF 41 with any other pure soil conditioning additives as this may cause immediate gel formation. If several foaming products or polymers are used on the TBM, it is preferable to reserve a specific transfer or dosing pump for MasterRoc SLF 41. If a transfer or dosing pump is being used for more than one product, it is recommended to clean the pump with water before switching to other products.

Storage

MasterRoc SLF 41 must be stored between 5°C and 35°C. If stored in original closed containers, it will have a shelf life of 12 months. Do not allow the product to freeze. Please contact your local representative prior to the use of any product that has frozen.

Safety precautions

Standard precautions for handling chemical products should be observed: Avoid eye and skin contact and wear rubber gloves and safety glasses. For further information, refer to the Material Safety Data Sheet.

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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