

MasterRoc[®] SLF 30

Soil conditioning foam for Tunnel Boring Machines (TBM)

Product description

MasterRoc SLF 30 is a foaming agent especially designed for soil conditioning in shielded tunnel boring machines.

Fields of application

- Soft ground tunneling

Features and benefits

- Improved soil behavior.
- Easier 'mucking'.
- Reduced permeability and increased sealing at the face.
- 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 through to the screw conveyor and conveyor. This reduces power consumption, enables soil extraction and conveyance, as well as reducing wear costs.
- Reduced stickiness in certain soils, which would lead to blockage problems.

Packaging

MasterRoc SLF 30 is available in standard 1000 liter IBCs.

Technical data

Form	Liquid
Color	Clear colorless
Density [kg/m³] 20°C	1035 -1045
Viscosity [mPas] 20°C	100
pH (5% solution) 20°C	6.5 – 7.5
Solubility in water	Total

Application procedure

An aqueous solution of MasterRoc SLF 30 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 will depend on the soil conditions encountered.

Consumption

Typically, MasterRoc SLF 30 is used at 2 to 3% (range 1.5 – 4%) 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 30 to strengthen the foam or 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 30 can be used with standard TBM dosing and foaming equipment.

Handling

Do not mix pure MasterRoc SLF 30 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 30. 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 30 must be stored between 5°C and 40°C. If stored in original tightly 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

MasterRoc SLF 30 contains no hazardous substances. However, standard precautions for handling chemical products should be observed. Avoid eye and skin contact and wear rubber gloves and safety glasses. If contact occurs, rinse with plenty of water. In case of eye contact seek medical advice. For further information, refer to the Material Safety Data Sheet.

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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.

Master Builders Solutions Hong Kong Limited

Unit 2, 20/F EW International Tower, 120-124 Texaco Road, Tsuen Wan, N.T., Hong Kong

Tel: (+852) 2408 4400

Fax: (+852) 2408 4401