

MasterRoc[®] SLF 47

Soil-conditioning foam for Tunnel Boring Machines

Description

MasterRoc SLF 47 is a highly eco-compatible polymer-reinforced foaming agent especially designed for soil conditioning in tunnel boring machines.

Applications

Soft ground tunneling with tunnel boring machines.

Features

- Based on renewable materials
- Improves soil plasticity
- Reduces permeability and increases sealing of the face
- Creates plastic deformation properties in the soil, which provide an even and controlled support pressure and increased face stability
- Lowers inner friction and abrasiveness of the soil at the cutterhead as well as at the screw conveyor

Benefits

- Reduces power consumption
- Enables quick soil extraction
- Reduces wear
- Compatible with highest environmental standards
- Promotes easier 'mucking'

Performance Characteristics

Technical Data

Typical Values

Form	Liquid
Color	Light brown
Density	64.6 to 65.2 lb/ft ³ at 68 °F (1035 to 1045 kg/m ³ at 20 °C)
pH	6 to 7 at 68 °F (20 °C)
Solubility in water	Total

Guidelines for Use

MasterRoc SLF 47 foam solution can be mixed with air to produce a stable foam. The foam recipe, foam expansion and the foam injection rate into the face, working chamber or screw conveyor depends on soil conditions encountered.

Dosage: Typically, MasterRoc SLF 47 soil conditioning foam is used as a 2 to 3% solution in water (general range 2 to 6%). MasterRoc SLP 1 or MasterRoc SLP 2 polymers (see separate data sheets) can be used simultaneously with MasterRoc SLF 47 soil conditioning foam in order to strengthen the foam or to adjust the properties of the excavated soil.

Foam Equipment: MasterRoc SLF 47 foam can be used with the standard TBM dosing and foaming equipment.

Storage and Handling

Handling: Do not mix pure MasterRoc SLF 47 foam 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 47 foam. 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 Temperature: MasterRoc SLF 47 foam should be stored in unopened, original containers, preferably between 40 °F and 95 °F (5 °C and 35 °C). If stored in original closed containers, MasterRoc SLF 47 foam will have a shelf life of 12 months. Do not allow the product to freeze. It is recommended that your local sales representative be consulted prior to the use of any product that has become frozen.

Safety: Standard precautions for handling chemical products should be observed. Avoid eye and skin contact and wear rubber gloves and goggles.

Packaging

MasterRoc SLF 47 foam is available in standard 54 gal (205 L) drums or 272 gal (1,029 L) totes. Bulk tanker supply is available on request.

Related Documents

Safety Data Sheets: MasterRoc SLF 47 foam

Additional Information

For additional information on MasterRoc SLF 47 foam, contact your local sales representative.

Master Builders Solutions creates technologies for the construction industry inspiring people to build better. We are active in ~40 countries and operate 35 production sites with over 1,600 employees. We develop, produce, and market high-quality chemical admixtures, as well as adjacent core technologies, to master the challenges of today and support a decarbonized future. Our people are pivotal and pair leading technologies and a strong brand heritage to surpass our customers' expectations and drive continuous value creation.

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