

MasterRoc[®] SLF 33

Soil conditioning foam for Tunnel Boring Machines (TBM)

DESCRIPTION

MasterRoc SLF 33 is a foaming agent specially designed for soil conditioning in shielded tunnel boring machines.

TYPICAL APPLICATIONS

- Soft ground tunneling with Tunnel Boring Machines
- Dust suppression in Hard Rock tunnelling

ADVANTAGES

- Improved soil behavior
- Easier 'mucking'
- Environmentally friendly

MasterRoc SLF 33 has been especially developed for soil conditioning in tunnelling with shielded TBM excavation. Generally, the product when mixed with the soil, provides for:

- 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.
- Reduces stickiness in certain soils, which would lead to problems with blockage
- In hard rock tunnelling and mining it can be used for dust suppression

PACKAGING

MasterRoc SLF 33 is available in standard 200 L drums.
 Bulk tanker or 1000 kg IBC supply is available on request.

TYPICAL PROPERTIES*

Form	Liquid
Color	Pale transparent
Specific gravity @ 25°C	1.020
Viscosity @ 20°C	100 mPas
pH @ 25°C	7.0 – 11.0
Solubility in water	Total

APPLICATION GUIDELINES

Foam is produced by dispersion of air into an aqueous solution of the **MasterRoc SLF 33**.

MasterRoc SLF 33 foam solution can be expanded 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 will depend on soil conditions encountered.

CONSUMPTION

Typically, the **MasterRoc SLF 33** is made into a 2-3% solution in water.

MasterRoc SLF P1 or **MasterRoc SLF P2** (see separate data sheets) can be added with the **MasterRoc SLF 33** to strengthen the foam or adjust the properties of the excavated soil.

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STORAGE AND SHELF LIFE

MasterRoc SLF 33 must be stored between 5°C and 35°C. If stored in original tightly closed containers, it will have a shelf life of 12 months.

Do not allow the product to freeze. It is recommended that your local Master Builders Solutions representative be consulted prior to the use of any product that has become frozen.

HEALTH AND SAFETY

MasterRoc SLF 33 contain no hazardous substances requiring labeling. However, standard precautions for handling chemical products should be observed: Avoid eye and skin contact and wear rubber gloves and goggles.

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.

A Risk Assessment report on the use of **MasterRoc SLF** products in tunnels can be for downloaded from the Master Builders Solutions website. Or ask your Master Builders Solutions representative for a copy.

* Properties listed are based on laboratory controlled tests.

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NOTE

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