

ROCK Foam 104

Item No. 0238

Foaming agent for soil conditioning in TBM tunnelling applications

FIELDS OF APPLICATION

ROCK Foam 104 is a highly concentrated biodegradable foaming agent especially designed for soil conditioning in shielded tunnel boring machines.

Effective ground treatment significantly improves the machine performance and enhances control of the soil flow through the screw conveyor.

ROCK Foam 104 is able to contribute to better advance rates, even in heterogeneous grounds containing gravel, sand and water, or under other critical geological conditions.

The carefully developed admixture allows the production of robust, reliable and steady foam, which is generally able to provide the following benefits:

- Increased productivity of TBM
- Optimised advance rates
- Reduced abrasiveness at the cutter head, screw conveyor and conveyor which can lead to
- Decreased wear costs and
- Lower replacement frequencies

- Facilitated soil extraction and conveyance
- Effective pressure control
- Reduced permeability
- Easier 'mucking'.
- Reduces stickiness which could lead to constraints for tunnel boring machine like clogging

- Environmentally-friendly admixture
- Biodegradable

DOSAGE

ROCK Foam 104 is typically used in a 0.5 – 2.0 % concentration.

Pre-tests to determine the consumption are required at any time. The dosage quantity has to be determined for each single application and can vary from the above given recommendation.

WORKING PRINCIPLE

ROCK Foam 104 consists of carefully selected components, which enable the production of high-quality foam. The produced foam shows a soft and steady consistency, which allows an increased soil behaviour.

This provides several technical, economic and ecological advantages.

TECHNICAL DATA

Homogeneity	homogenous
Colour	colourless
State	liquid
Density	1.04 ± 0.02 g/cm ³
pH-value	7.0 ± 1.0
Workability	from +1 °C
Shelf life	approx. 1 year from date of production if stored properly
Storage conditions	Store in unopened, original sealed packaging between +5 °C and +40 °C. Protect from frost and insolation.

PROCESSING INDICATIONS

For producing foam, ROCK Foam 104 need to be diluted in water and must be dispersed with air. Suitable TBM dosing and foaming equipment is required for an appropriate application.

The foam recipe, foam expansion and the foam injection rate depend on soil conditions and varies accordingly.

Do not use ROCK Foam 104 in conjunction with any other soil conditioning admixture!
If several foaming products are applied, it is recommended to use a specific transfer or dosing pump for each one. If a transfer or dosing pump is used for more than one product, it is preferable to clean it with water before changing to other products.

This product is classified as hazardous according to the CLP regulations. See safety data sheet for further information.

PACKAGING

- 30 l can
- 200 l barrel
- 1000 l container

REMARKS

This information describes the application- and processing possibilities of a product and its operation principles under regular conditions. Having no influence on the further application and processing, especially in conjunction with other construction materials, the given indication are neither a warranty in respect of the product's properties or its fitness for a particular purpose nor a full instruction of use. This information, any other recommendation or verbal advice are not binding and do not infer to any liability or legal demand.

Due to continuous further development, the most recent Technical Data Sheet is valid and will be supplied on request. All orders are accepted subject to our current general terms and conditions.

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SUITABILITY- AND PRE-TESTS ARE NECESSARY BEFORE APPLYING THE CONCRETE ADMIXTURE!