

UNDERFOAM ABF 500

Anti-Wear Foam for Hard Rock Tunnel Boring Machines (TBM).

DESCRIPTION

Underfoam ABF 500 is a foam agent that has been developed to reduce abrasion for tunnel boring machines (TBM) against abrasive rocks and soft soil containing abrasive mineral. It is designed to ensure dust suppression, temperature reduction, and abrasion reduction.

FIELD OF APPLICATION

- Abrasive soft soils
- Abrasive hard rocks
- Working environments with excessive dust emissions and temperatures.

ADVANTAGES

- Reduces the wear of cutters and metal parts by mitigating the angle of internal friction.
- Prevents dusting.
- Reduces the temperature cutter heads, cutters, and ambient temperature.
- Ensures machinability by providing soil consistence control.
- Reduces cutter head and spiral conveyor torque, while increasing the machine performance.
- The product is biodegradable.

USE

- Underfoam ABF 500 foam agent delivers a stable foam by being mixed with water and air through the use of CF, FER, and FIR rates by means of a foam generator. The foam is injected into the face and screw conveyors via a pipeline.
- Recommended foam agent consumption quantity is 1 l/m³.
- CF value is recommended between 1 and 5% in general.
- Recommended FER value is 10 in general.
- CF value is recommended between 30 and 80% in general.
- CF, FER, FIR values of Underfoam ABF foam agent is characteristic for every project and it may vary depending on the tunnel and geological conditions.

- In order to select correct CF, FER, and FIR values, the FER (foam expansion) and FIR (foam injection) parameters must be determined in the first place through the laboratory tests recommended in EFNARC Specification and Guidelines for the use of specialist products for Mechanized Tunneling (TBM) in Soft Ground and Hard Rock specifications by considering especially the material characteristics, which impact the TBM performance.

AMOUNT OF USE

For the use of CF, FER, and FIR rates in correct values, action must be taken according to the site and tunnel analyses of Polisan Kimya Underground Chemicals' technical support team.

STORAGE CONDITIONS AND PACKAGING

Store the product at a temperature above 5 0C. In case the product freezes, stir mechanically and with due care for reinstating after thawing. It is offered for sale in IBC tanks of 1000 kg and in bulk. The product's shelf life is 12 months unless IBC container is opened.

SAFETY INFORMATION

Avoid the contact of additive with skin and eyes, and flush rinse with plenty of water in case of contact. Rinse immediately with plenty of water in case of contact with eyes and seek medical attention. Wear protective gloves, glasses and mask during use. Refer to the product's material safety data sheet (MSDS) for more information.