



## **Modifoam L - foaming agent**

Modifoam L is a foaming agent designed for soil conditioning in tunneling processes using Earth Pressure Balance Machines (EPBM). The product is specifically dedicated to higher-permeability soils, primarily composed of sands with minimal amounts of clays, silts, and muds. It is a carefully formulated mixture of anionic surfactants, inhibitors, and polymers, creating a stable foam.

### **APPLICATION & DOSAGE**

The generated foam is injected into the working chamber during the tunneling process. The dosage of Modifoam L depends on geological conditions and the water content in the soil. The recommended dosage is 1.5–3% by weight relative to water.

FER (Foam Expansion Ratio): 1:5 to 1:20.

FIR (Foam Injection Ratio): 10% to 100%, recommended range: 40–60%.

In variable geological conditions with localized layers of clays, silts, and muds, the properties of Modifoam L can be adjusted with the following additives:

- Modistab TBM: Improves foam stability, inhibits clay swelling, and reduces adhesion of soil to machine components.
- Modisperg TBM: Enhances soil consistency, reduces soil viscosity, disperses clays and silts, and minimizes soil adhesion to machine parts.

### **BENEFITS**

- Easily mixes with excavated material, improving the tunneling process and increasing TBM efficiency,
- Provides lubricating properties, minimizing friction between soil particles and reducing the cutterhead torque,
- Foam can be produced using either soft or hard water,
- Suitable for both acidic and alkaline soil conditions,
- Environmentally safe and non-toxic.

### **PROPERTIES**

Appearance: Colorless liquid,

Density:  $\pm 1050 \text{ kg/m}^3$ ,

pH: 7.5–9.5.

## **PACKAGING AND STORAGE**

Modifoam L is supplied in 200 kg drums or 1000 kg IBC containers.

The product should be stored in its original containers at temperatures between +5°C and +35°C. The shelf life is 12 months from the production date.