Tunnel Excavation by Tunnel Boring Machine



MasterRoc[®] SWA 750 Binding agent designed to improve

rheological properties of drilling fluids

Description

MasterRoc SWA 750 is a liquid, water-soluble polymer that works as a binding agent to reduce fluid loss and to boost viscosity of the drilling fluid. MasterRoc SWA 750 polymer can be used to enhance the performance of MasterRoc soil conditioning products in difficult ground conditions. MasterRoc SWA 750 polymer is also suitable for the sealing of the excavation face during hyperbaric interventions in combination with the injection of bentonite or filler slurries.

Applications

MasterRoc SWA 750 polymer can be used in the Earth Pressure Balance (EPB) Tunnel Boring Machine (TBM) and the Slurry TBM to

- modify the properties of the bentonite slurry to improve the yield of the slurry, especially under high soil porosity or saline water conditions
- improve the filter cake properties of the slurries
- be used as a lubricant for pipe jacking

Features

- Structures the soil, especially in coarse and clean sands and gravels below groundwater levels
- Reduces soil permeability
- Creates plastic deformation properties in the soil
- Lowers the inner friction and abrasiveness of the soil

Benefits

- Provides even and controlled support pressures
- Increases stability of the excavation face
- Improves the yield and filter cake properties of bentonite slurry

Performance Characteristics

Technical Data (Typical)

Form	Liquid
Color*	White
Density*	65.5 lb/ft³ (1.05 g/cm³)
pH*	2.8
Viscosity (DIN EN ISO 2555)	15 – 20 mPa.s
Solubility in water	Miscible

*@ 68 °F (20 °C)

Guidelines for Use

Dosage and Application Procedure: Dosage of MasterRoc SWA 750 polymer depends on the ground conditions and the amount of water content in the slurry. Trials should be conducted prior to the application to determine the optimum concentration of MasterRoc SWA 750 polymer.



Storage and Handling

Storage Temperature and Shelf Life: The storage temperature of MasterRoc SWA 750 polymer is between 40 °F and 95 °F (5 °C and 35 °C). If stored in the original and tightly closed containers, MasterRoc SWA 750 polymer will have a shelf life of 6 months. Do not allow the product to freeze. Consult your local sales representative before using any product that has become frozen.

Safety: Standard precautions for handling chemical products should be observed. Avoid eye and skin contact and wear gloves and safety goggles. If contact occurs, rinse with plenty of water. In case of eye contact, seek medical advice. For further information, refer to the Safety Data Sheet.

Packaging

MasterRoc SWA 750 polymer is supplied in IBC totes and drums.

Related Documents

Safety Data Sheets: MasterRoc SWA 750 polymer

Additional Information

For additional information on MasterRoc SWA 750 polymer, please contact your local sales representative.

Master Builders Solutions creates technologies for the construction industry inspiring people to build better. We are active in \sim 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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