

MasterRoc[®] SWA 710

Strong Thickener for Soil Conditioning in Tunnel Boring Machines (TBM)

Description

MasterRoc SWA 710 is a liquid polymer that is specifically designed for use in the ground and slurry conditioning. MasterRoc SWA 710 polymer works as a binding agent that restructures soils with poor grading and low fines content, increasing its plasticity and cohesion, which helps to improve the balance of pressure in the working chamber, leading to better ground stability and soil extraction.

MasterRoc SWA 710 polymer can be used to enhance the performance of MasterRoc SLF foams and MasterRoc ACP soil conditioning products in difficult ground conditions, such as, coarse soil with low fine content, or saturated soil with high water pressure. MasterRoc SWA 710 polymer is also suitable for use for an adequate sealing of the excavation face during hyperbaric interventions in combination with the injection of bentonite or filler slurries.

Applications

Recommended for use in:

- Earth Pressure Balance (EPB) and Slurry TBMs
- High ground water pressures, poorly graded ground, water-saturated ground, ground containing low amount of fine particles
- Bentonite slurry modification in case of high soil porosity or saline water conditions
- Improving the yield and filter cake properties of bentonite and filler slurries
- Lubricant for pipe jacking

Features

- Reduces soil permeability
- Ready to use - no mixing equipment required

Benefits

- Structures the soil, particularly effective in coarse, clean sands and gravels below groundwater
- Provides an even and controlled support pressure
- Increases excavating face stability
- Increases cohesion of coarse sands and gravels
- Improves the yield and filter cake properties of bentonite slurries
- Creates plastic deformation properties in the soil
- Lowers the inner friction and abrasiveness of the soil

Performance Characteristics

Technical Data (Typical)

Form	Viscous Liquid
Color	Milky White
Density* lb/ft ³ (g/cm ³)	65.5 lb/ft ³ (1.05 g/cm ³)
pH*	7.0
Viscosity at 73 °F (23 °C)	750 mPa.s

*@ 68 °F (20 °C)

Guidelines for Use

Dosage and Application Procedure: MasterRoc SWA 710 polymer can be added by a separate dosing pump into the foaming solution. MasterRoc SWA 710 polymer can also be used independently, in which case it is injected directly to the working chamber or the screw conveyor.

The quantity of MasterRoc SWA 710 polymer needed depends on the soil conditions. Trials should be conducted to determine the optimum concentration of polymer. The dosage depends on the application field and the amount of water content in slurry or excavated ground. For the use of MasterRoc SWA 710 polymer in conjunction with other soil conditioning agents, please contact your local Master Builders Solutions representative.

Storage and Handling

Storage Temperature and Shelf Life: The storage temperature of MasterRoc SWA 710 polymer is between 40 °F and 95 °F (5 °C and 35 °C). If stored in the original, tightly closed containers under the above conditions, MasterRoc SWA 710 polymer will have a shelf life of 6 months. Do not allow MasterRoc SWA 710 polymer to freeze. Please contact your local Master Builders Solutions representative prior to the use of any product that has frozen.

Safety: MasterRoc SWA 710 polymer contains no hazardous substances. However, standard precautions for handling chemical products should be observed. Avoid eye and skin contact and wear rubber gloves. For further information, refer to the Safety Data Sheet.

Packaging

MasterRoc SWA 710 polymer is supplied in IBC totes, drums, and pails.

Related Documents

Safety Data Sheets: MasterRoc SWA 710 polymer

Additional Information

For additional information on MasterRoc SWA 710 polymer, please contact your local sales representative.

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