

# MasterRoc<sup>®</sup> SLP 2

## Liquid Polymer for soil conditioning in Tunnel Boring Machines

Formerly MEYCO SLF P2\*

### Description

MasterRoc SLP 2 liquid polymer is used to enhance the performance of the MasterRoc foaming products in difficult ground conditions. MasterRoc SLP 2 liquid polymer is used in coarse soil with low fine content or saturated soil with high water pressure.

MasterRoc SLP 2 liquid polymer can also be used to modify the properties of bentonite slurries for slurry TBM applications.

### Applications

Recommended for use in:

- Soil conditioning in Earth Pressure Balance (EPB) shield machines
- Poorly graded and low fine ground, saturated ground and high water pressure ground in EPB shield machines
- Improving the yield and filter cake properties of bentonite slurries; Suitable for bentonite slurries in saline conditions

### Features

- Ready-to-use liquid polymer
- Environmentally preferable

### Benefits

MasterRoc SLP 2 liquid polymer was designed for soil conditioning with shielded TBM excavation. MasterRoc SLP 2 liquid polymer has excellent performance in restructuring soil and is effective in coarse, clean sands and gravels. When mixed with one of the MasterRoc foams, MasterRoc SLP 2 liquid polymer provides:

- Reduced permeability and increased sealing at the face
- Even and controlled support pressure and increased face stability
- Lower inner friction and lower abrasiveness of the soil at the cutterhead through to the screw conveyor, reducing power consumption and wear to the tools
- Increased cohesion of coarse, clean sands and gravels – smoother soil extraction
- Water soaking and swelling effect, turning wet soil into a more manageable consistency
- Improving the yield of bentonite slurries. Suitable for bentonite slurries in saline conditions

### Performance Characteristics

**Consumption:** Typically, the consumption of MasterRoc SLP 2 liquid polymer is between 0.3 to 4% of the foam solution. In some circumstances, other dosage levels may be required. Contact your local sales representative for assistance.

### Technical Data

Form	Viscous Liquid
Color	Light Brown
pH at 68 °F (20 °C)	8.5 to 10.5
Density at 68 °F (20 °C)	56.2 to 59.3 lb/ft <sup>3</sup> (900 to 950 kg/m <sup>3</sup> )
Viscosity at 68 °F (20 °C)	<500 cP (mPa.s)

## Guidelines for Use

**Application:** MasterRoc SLP 2 liquid polymer is normally added through a separate pump into the foam solution stream before the foam generator. The mixture is then generated into the foam by the foam generator and injected into the cutterhead and working chamber. MasterRoc SLP 2 liquid polymer can also be added after the foam has been generated and prior to injection to the cutterhead and working chamber. MasterRoc SLP 2 liquid polymer can also be used alone, in which case, it is injected directly to the working chamber or the bottom of the screw conveyor. The quantity of MasterRoc SLP 2 liquid polymer used will vary according to the soil condition.

**Consumption:** Typically the consumption of MasterRoc SLP 2 liquid polymer is between 0.3 to 4% on the foam solution (0.012 to 0.125 lb/ft<sup>3</sup> (0.2 to 2 kg/m<sup>3</sup>) on the volume of soil excavated). Other dosage levels may be appropriate in certain circumstances, which requires consultation with your local representative.

## Storage and Handling

**Storage Temperature:** MasterRoc SLP 2 liquid polymer should be stored at temperatures between 41 °F and 95 °F (5 °C and 35 °C). Do not allow MasterRoc SLP 2 liquid polymer to freeze. If MasterRoc SLP 2 liquid polymer freezes, contact your local sales representative prior to use.

**Shelf Life:** MasterRoc SLP 2 liquid polymer has a minimum shelf life of 6 months if stored in original tightly secured containers. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterRoc SLP 2 liquid polymer has been exceeded.

**Safety:** MasterRoc SLP 2 liquid polymer contains no hazardous materials. However, it is recommended that all normal precautions be taken when handling the product such as the use of eye protection and gloves. Refer to the Safety Data Sheet for MasterRoc SLP 2 liquid polymer for more information.

## Packaging

MasterRoc SLP 2 liquid polymer is available in 53 gal (200 L) drums and 264 gal (1,000 L) totes.

## Related Documents

Safety Data Sheets: MasterRoc SLP 2 liquid polymer

## Additional Information

For additional information on MasterRoc SLP 2 liquid polymer, contact your local sales representative.

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\* MasterRoc P2 became MasterRoc SLP 2 under the Master Builders Solutions brand, effective October, 2013.

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