

# MasterRoc<sup>®</sup> ACP I 48

Readily Biodegradable Foaming Agent with Clay Separating Polymers for Adhesion Prevention and Next Generation Anti-Clogging Performance in Tunnel Boring Machines (TBM)

## Material Description

**MasterRoc<sup>®</sup> ACP I 48** is a foaming agent especially de-signed for soil conditioning in soft ground conditions, clayey soils with clogging and adhesion issues. MasterRoc<sup>®</sup> ACP I 48 guarantees improved rheology of the excavated soil and facilitates extraction from outside the excavation chamber by reducing clogging and adhesion to metal parts of the machine. MasterRoc<sup>®</sup> ACP I 48 is an eco-friendly foaming agent, based on readily biodegradable raw materials.

## Areas of Application

MasterRoc<sup>®</sup> ACP I 48 is designed for clayey soils in any kind of environments since it remains stable and homogeneous also when the temperature drops. MasterRoc<sup>®</sup> ACP I 48 can be used with the standard foam generators installed in all EPB machines. It must be injected at the cutterhead to the front into the TBM working chamber.

## Dosing System

MasterRoc<sup>®</sup> ACP I 48 can be used with the standard TBM dosing and foaming equipment.

### Technical Properties

|                                                 |                               |
|-------------------------------------------------|-------------------------------|
| Form                                            | Liquid                        |
| Color                                           | Transparent – Light Yellowish |
| Specific Gravity (20°C)                         | 0,96 – 1,06 kg/l              |
| pH Value                                        | 4 – 7                         |
| Viscosity                                       | ≤ 100 mPas                    |
| <b>MasterRoc<sup>®</sup> ACP I 48 exhibits:</b> |                               |
| Extensive clogging reduction in clayey soils    |                               |
| Ensured reduction of adhesion to metal parts    |                               |
| High foamability                                |                               |
| High Half-Life Drainage Time (HLT)              |                               |
| High mechanical resistance and strength         |                               |

## Characteristics and Benefits

- Reduced clogging and adhesion effects on the cutterhead
- Creation of a plastic soil material which can be easily excavated and transported.
- Reduced wear of metal parts of the TBM
- Reduction of cutterhead torque
- Increase in TBM speed.
- Avoiding re-agglomeration of clay chips to blocks
- Creation of plastic deformation properties in clayey soil, which increases extraction.
- Lower inner friction and lower abrasiveness of the soil at the cutterhead and shield

## Application Procedure

MasterRoc<sup>®</sup> ACP I 48 is used as aqueous solution with a typical 1 % - 3 % concentration. Easily injectable by any standard foam generator installed in TBM EPB machines. For the first use and combination with other soil conditioning agents, please contact your local Master Builders Solutions representative.

## Packaging

**MasterRoc<sup>®</sup> ACP I 48** is available in standard 1000 kg IBCs and bulk.

## Storage and Shelf Life

**MasterRoc<sup>®</sup> ACP I 48** must be stored between 5°C and 40°C. At low temperatures the product can become slightly turbid, but this doesn't affect the performance once remixed and homogenized, being the formulation chemically reversible. Do not allow the product to freeze. If stored in original tightly closed containers, it will have a shelf life of 12 months.

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## Health and Safety

For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapor until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

## Disclaimer

The technical information given in this publication is based on the present state of our best scientific and practical knowledge. **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is only responsible for the quality of the product **MBT Teknik Yapı Kimyasalları Sanayi ve Ticaret A.Ş.** is not responsible for results that may occur because the product is used other than advised and/or out of instructions regarding the place and the method of use. This technical form is valid only till a new version is implemented and nullifies the old ones.

## Contact

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