

# MasterRoc<sup>®</sup> ABR 3

## Anti-Abrasion and Dust-Reducing Agent for Hard Rock Tunnel Boring Machines (TBM)

### Description

MasterRoc<sup>®</sup> ABR 3 liquid foaming agent is specifically formulated to reduce abrasive wear on cutting tools in Tunnel Boring Machines (TBMs) and to significantly minimize dust formation during hard rock excavation. It provides effective protection for cutterhead components and improves overall tunneling efficiency..

### Applications

MasterRoc ABR 3 is designed for use in hard rock TBM excavation, where abrasive wear and dust control are critical to safe and efficient operation.

### Features

- Reduces abrasive wear on TBM cutting tools
- Minimizes dust formation
- Lowers the friction and abrasiveness at the cutterhead and screw conveyor
- Reduces blockages in the cutterhead, working chamber, and muck transfer system
- Environmentally compatible formulation

### Benefits

- Improves working conditions for TBM operators
- Extends the service life of excavation tools
- Reduces TBM downtime and increases advance rates
- Decreases power consumption and operational costs

### Product Properties

Property	Typical Value
Form	Liquid
Color	Transparent
Density*	63.4 lb/ft <sup>3</sup> (1.015 g/cm <sup>3</sup> )
pH*	10.5
Viscosity (dynamic)	100 cP (mPa.s)

\*@68 °F (20 °C)

## Application Guidelines

**Application Procedure:** MasterRoc ABR 3 is used with standard foam-generating systems typically found in EPB-type TBMs. The recommended Foam Expansion Ratio (FER) is 8-15, and the recommended Foam Injection Rate (FIR) is 30%. The generated foam is injected through the foam or water injection ports directly onto the cutter head. For site-specific optimization, consult your local Master Builders Solutions representative.

**Recommended Dosage:** MasterRoc ABR 3 is typically used as a 2 – 6% solution in water. Laboratory trials are strongly recommended to determine the optimum dosage for maximum performance.

**Storage and Shelf Life:** MasterRoc ABR 3 should be stored in tightly sealed containers in a cool, dry location. Storage temperature should be between 40 °F and 95 °F (5 °C and 35 °C). Avoid direct sunlight and freezing conditions. If stored in the original tightly closed containers and in the recommended storage conditions, MasterRoc ABR 3 has a minimum shelf life of 12 months.

**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 ABR 3 is available in 275-gallon (1041 L) IBC totes and 55-gallon (208 L) drums. Bulk delivery is available upon request.

## Related Documents

Safety Data Sheets: MasterRoc ABR 3 liquid foaming agent

## Additional Information

For additional information on MasterRoc ABR 3 liquid foaming agent, please contact your local sales representative.

## Limited Warranty Notice

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