

# MasterRoc<sup>®</sup> ABR 5

---

Liquid anti-abrasion agent for Hard Rock and EPB Tunnel Boring Machines (TBM)

## Product description

MasterRoc ABR 5 is specifically designed to reduce abrasion and dust for tunnel boring machines operating in hard rock mode.

## Fields of application

It is used to reduce abrasive wear to the cutting tools, and to substantially reduce dust formation during excavation as well as cutterhead clogging.

## Features and benefits

- Reduction of abrasive wear for cutting tools.
- Effective reduction of dust formation, leading to considerably improved working environment for TBM personnel.
- Better cooling of the cutterhead, improving the rubber seal durability, and extending the life of the cutter bearing.
- Reduce TBM down time due to less frequent cutter changes, therefore more time available for excavation.
- Improved transfer of the muck from the cutter head, resulting in reduced risk of blockage, cleaner cutter discs and cutterhead area, which make maintenance easier and reduce cutter disc changing time.
- Overall cost saving due to higher monthly advance rate and lower maintenance cost.

## Packaging

MasterRoc ABR 5 is available in standard 1000 liter containers.

## Technical data

<b>Form</b>	Liquid
<b>Color</b>	Yellow to brown, transparent
<b>Density; kg/liter; 20°C</b>	1.02 -1.04
<b>pH; 20°C</b>	7.5 – 8.5
<b>Viscosity; mPa.s; 20° C</b>	Max. 500

## Application procedure

MasterRoc ABR 5 must first be turned into foam before it can be used. For this purpose, foam generating equipment typically used in Earth Pressure Balance (EPB) machines is recommended. The proposed foam expansion ratio (FER) is 8-15. The generated foam is then injected through foam or water injection ports at the cutterhead. The foam injection rate (FIR) is typically 30%.

## Consumption

The typical consumption rate of MasterRoc ABR 5 is 0.5 – 1.5 kg/m<sup>3</sup> of undisturbed rock.

## Storage

MasterRoc ABR 5 should be stored between 5°C and 40°C. If stored in original tightly closed containers MasterRoc ABR 5 has a shelf life of 12 months. Do not allow the product to freeze. Please contact your local representative prior to the use of any product that has frozen.

## Safety precautions

MasterRoc ABR 5 contains no hazardous substances. However, standard precautions for handling chemical products should be observed. For further information, refer to the Material Safety Data Sheet and relevant local regulations.

The information given here is true, represents our best knowledge and is based not only on laboratory work but also on field experience. However, because of numerous factors affecting results, we offer this information without guarantee and no patent liability is assumed. For additional information or questions, please contact your local representative.

### Master Builders Solutions Hong Kong Limited

Unit 2, 20/F EW International Tower, 120-124 Texaco Road, Tsuen Wan, N.T.,  
Hong Kong

Tel: (+852) 2408 4400

Fax: (+852) 2408 4401

A brand of

**MBCC** GROUP