

# MasterRoc<sup>®</sup> BA 110

Bentonite powder for use in annular grout mixes for injection behind tunnel segments in TBM projects

## Material Description

MasterRoc BA 110 is a medium yield\* sodium bentonite showing particular characteristics such as viscosity, gel strength, thixotropy and water retention ideal for use in TBM annular grouts.

\*around 15 m<sup>3</sup> of mud by ton of bentonite for Marsh viscosity = 40 s.

## Packaging

MasterRoc BA 110 is available in 1000 kg bags.

## Technical Data

Aspect	Pinkish powder
Swelling	12 ml / g
Specific weight	2.6-2.7 g/cm <sup>3</sup> approx.
Apparent density	0.73 g/cm <sup>3</sup>
Moisture content	8-14%
Dry sieve residue	17%
Wet sieve residue	≤4%

## Mud and Product Specification <sup>1</sup>

Marsh viscosity	≥ 38
Filtrate (30 min)	≤ 25 ml
Decantation (4 h)	< 1%
Wet screen analysis (75 µm)	< 4%
Water content	8 à 14 %

<sup>1</sup> = Obtained with 45 g/l tap water, mixed at 1500 rpm during 3 min, and after 1 h ageing at 20°C.

## Indicative Rheological Performance after 1 Hour Ageing <sup>2</sup>

Dosage	Marsh Viscosity (API)	Filtrate (ISO 13500)
40 g/l	33 – 36 s	< 30 ml
45 g/l	≥38 s	< 25 ml

50 g/l                      41 – 55 s                      < 25 ml  
<sup>2</sup> = No guaranteed values because the properties are strongly dependent on water quality and mixing procedures

## Atterberg Limits

Dosage	MasterRoc BA 110
Liquid Limit WL	480%
Plastic Limit WP	60%
Plasticity Index IP	420

## Application Procedure

Standard dosage is 50 kg/m<sup>3</sup> of water. Water should satisfy minimum standards of quality. Depending on ground characteristics and the required viscosity this quantity may require onsite variations. It is necessary to impart enough turbulence or shear during mixing time so as to ensure the correct hydration of the product. MasterRoc BA 110 may be complemented by Master Builders Solutions additives depending on the final application.

## Storage

Keep the product in its original packaging at ambient temperature and protect it from humidity. A loss of rheological and filtrate properties may result from inadequate storage.

## Safety Precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek immediate medical attention. Keep away from children and animals. Reseal containers after use. For further information, refer to material safety data sheet.

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## Disclaimer

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.

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