

MasterRoc MG 46

Low to medium density foaming grout

Material Description

MasterRoc MG 46 is a low to medium density cementitious foaming grout that yields large volumes of grout from small quantities of powder.

Once hardened, **MasterRoc MG 46** produces a solid, durable, low to medium density fill product suitable for many applications in mining and tunneling.

Areas of Application

MasterRoc MG 46 is suitable for use whenever controlled, low to medium strength and weight materials can be used; applications include:

Mining

- Explosion seals
- Ventilation stoppings
- Backfilling
- Temporary and low to mid strength support
- Cavity filling
- Rib replacement
- Bulk heads

Civil

- Backfilling over pipes
- Thermal and sound insulation
- Structural fills
- Pavement bases
- Erosion control

Characteristics and Benefits

- Fast setting time reduces the requirement for heavy formwork and allows large cavities to be filled in one lift
- Rapid strength gain for early bearing of load
- Compresses significantly under load prior to failure
- Excellent flowability ensure cavity is completely filled
- Excellent long term stability
- Ease of placement
- Durability consistent with low water:powder ratio portland cement mixes

Performance Data

The strength and density of **MasterRoc MG 46** depends on the water:powder ratio used for mixing, length and diameter of the pumping line and the condition of the placing pump.

The lower the water:powder ratio, the higher the compressive strength and density, and the more durable the final product. A continuous cell structure is preferred.

At a water:powder ratio of approximately 0.7, the following results were obtained:

AGE	TYPICAL COMPRESSIVE STRENGTH (MPa)
1 Day	4
7 Days	9
28 Days	14

PROPERTIES	INFORMATION
Pump Type	Continuous Placer
Pump Setting	Slow or Foam
Water Flow Rate	20-32 L/min
Pumping Line Type	Poly Pipe (Blue line)
Pumping Line Length	40-100m
Pumping Line	25-40mm
Foamed Grout Density	Between 600 -1300 kg/m ³

Data dependent on strength and yield required. It is strongly advised to seek consultation with a Master Builders Solutions Technical Representative prior to using **MasterRoc MG46.*

Quantity to Use

One tonne of **MasterRoc MG 46** powder can yield up to 3.0m³ of foamed grout.

This is only a guide and onsite tests should be done to confirm yield. Yield can be affected by water quality, placing, pump efficiency, hose length and diameter. Calibration of the placing pump must be done prior and during operations to ensure consistency.

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Application

MasterRoc MG 46 has been designed for use with a continuous placing machine. These machines are recommended as they are easy to operate and once set up only require the dry powder to be fed continuously into the top hopper. Different types of placing pumps give different yields and foaming characteristics.

For guidance, it is strongly recommended to consult a Master Builders Solutions Technical Representative prior to application.

MasterRoc MG 46 requires no pre-mixing, and is supplied direct to the hopper of the placing pump. The placing pump once set up correctly, adds the water, mixes and pumps the product.

Calibration of both the water flow and product throughput of the placer pump should be undertaken prior to use and during operation. Wet density should be checked periodically to ensure consistent quality of strength and yield.

Packaging

MasterRoc MG 46 is available in 20kg and 800kg bulka bags.

Disclaimer

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STATEMENT OF RESPONSIBILITY

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NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by MB Solutions Australia Pty Ltd either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not MB Solutions Australia Pty Ltd, are responsible for carrying out procedures appropriate to a specific application.

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