

MasterRoc MF 701

High-performance backfill admixture

MATERIAL DESCRIPTION

MasterRoc MF 701 ready-to-use, non-chloride liquid admixture is used for making more uniform and predictable high-performance backfill. **MasterRoc MF 701** admixture retards or stabilizes setting time by controlling the hydration of portland cement and other cementitious materials to facilitate pumping and placing operations. It can be used to stabilize cement slurries for cemented rock fills, hydraulic and paste backfills.

APPLICATIONS

- Stabilization of cement slurries for cemented rock fills.
- Stabilization of paste, high-density and hydraulic fills.

FEATURES

- Reduced water content.
- Controlled setting time characteristics.
- Improved slump and flow characteristics.

BENEFITS

- A longer working and retention time of the fill (open time), which can be controlled by the dosage rate
- Provides flexibility in the scheduling of backfilling operations
- Dramatically reduces potential of pipe blockages due to control of cement hydration and setting time
 - Up to 25% increase in batches per day
 - Up to 45% decrease in flushing of pipes
 - Provides the opportunity for “Hot Change” between shifts
 - Reduces piping replacement costs
- Reduces pressure losses and enables longer transportation distances
- Improved reliability of fill delivery and increased production
- Increased in-situ compressive strength
- Mix optimization and/or cost savings by binder reduction (cement/slag cement/fly ash)
- Cleaner mixing and agitator tanks
 - Easier maintenance

PERFORMANCE CHARACTERISTICS

Rate of Hardening:

The ambient temperature and the temperature of the backfill mixture, distribution piping, substrate, and air, affect the setting or hardening rate of a backfill mixture. At higher temperatures, backfill mixtures harden more rapidly which causes problems with distribution and placement. One of the functions of **MasterRoc MF 701** admixture is to stabilize and control the hydration of the binder portion of the backfill. Within the normal dosage range, **MasterRoc MF 701** admixture will generally extend the working and setting times of backfills by approximately 2 to 10 hours, depending on the dosage of the admixture, the backfill materials and temperatures. Trial mixes should be made under approximate site conditions to determine the dosage required.

Compressive Strength:

Backfills produced with **MasterRoc MF 701** admixture will generally develop higher strengths than plain backfill when the admixture is used within the recommended dosage range and under normal, comparable curing conditions.

Within the recommended dosages, **MasterRoc MF 701** admixture will not negatively affect early strength development. Site testing is recommended to confirm early strength development at 2 or 3 days as the kinetics of hydration depends on binder content and composition, site conditions, and dosage of the admixture.

GUIDELINES FOR USE

Dosage:

MasterRoc MF 701 admixture is recommended for use at a dosage of 400 to 1300 mL per tonne of wet backfill for most backfill mixtures using average backfill ingredients. Because of variations in backfill operations and backfilling materials, dosages other than the recommended amounts may be required. In such cases, contact your local sales representative.

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PRODUCT NOTES

Corrosivity:

Non-Chloride, Non-Corrosive: **MasterRoc MF 701** admixture will neither initiate nor promote corrosion of reinforcing steel in concrete. This admixture does not contain intentionally added calcium chloride or other chloride-based ingredients.

Compatibility:

MasterRoc MF 701 admixture may be used in combination with any Master Builders Solutions admixture. When used in conjunction with another admixture, each admixture must be dispensed separately into the mix.

STORAGE AND HANDLING

Storage Temperature:

Minimum storage temperature is 1°C for **MasterRoc MF 701**. If **MasterRoc MF 701** admixture freezes, thaw at 2°C or above and completely reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

Shelf Life:

MasterRoc MF 701 admixture has a minimum shelf life of 12 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of **MasterRoc MF 701** admixture has been exceeded.

PACKAGING

MasterRoc MF 701 admixture is supplied in 210 L drums, 1000 L flowbins or by bulk delivery.

ADDITIONAL INFORMATION

For additional information on **MasterRoc MF 701** admixture and our entire portfolio of backfill solutions, contact your local sales representative.

NOTE

Technical support, where provided, does not constitute supervisory responsibility. For additional information contact your local MB Construction Chemicals Solutions South Africa (Pty) Ltd representative. MB Construction Chemicals Solutions South Africa (Pty) Ltd shall not be liable for technical advice provided.

MB Construction Chemicals Solutions South Africa (Pty) Ltd reserves the right to have the true cause of any difficulty determined by accepted test methods. Undertaking such tests is not, and shall not be deemed to be, an admission of liability or an assumption of any risk, loss, damage or liability.

QUALITY AND RESPONSIBLE CARE

All products originating from MB Construction Chemicals Solutions South Africa (Pty) Ltd are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001, environmental and occupational health and safety standards.

* Properties listed are based on laboratory controlled tests.

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