

MasterRoc[®] MF 510

High-Performance Plasticizing and Water-Reducing Admixture for Mine Backfill Mixtures

Description

MasterRoc MF 510 admixture is a ready-to-use high-range water-reducing admixture designed for mine backfill applications.

MasterRoc MF 510 admixture is particularly effective in improving the consistency of the backfill mixtures. This is accomplished by providing unparalleled slump retention without compromising early-age compressive strength development and setting time. Slump retention helps to maintain more consistent performance from batch to batch, thereby improving operational efficiencies.

Applications

Recommended for use in:

- Backfill mixtures requiring high early compressive strength development or faster re-entry.
- Backfill mixtures where high flowability, increased stability and durability are needed.
- Backfill mixtures with varying water reduction requirements.
- For significant binder optimization and/or overall cost savings.

Features

- Reduced water content
- Superior slump retention
- Optimum setting time
- Dosage flexibility

Benefits

- Reduces the water content of backfill mixtures leading to higher in-situ strengths
- Workability retention without retardation
- Lower viscosity and lower friction losses in transportation
- Reduces pump and distribution pressures
- Enhances rheology
- Consistency in operations
- Optimizes mixture costs
- Ability to attain difficult combinations of high-early and late-age compressive strengths
- Excellent early-age strength development
- High ultimate strengths
- Increases productivity
- Improves operational efficiencies

Performance Characteristics

Slump Retention: Backfill mixtures produced with MasterRoc MF 510 admixture maintain slump significantly longer than those made with other high-range water-reducing admixtures. This slump retention is achieved without affecting rate of hardening or early-age compressive strength development.

Guidelines for Use

Dosage: The dosage range for MasterRoc MF 510 admixture may be affected by the total cementitious materials content of the backfill mixture and by the particle size distribution of the backfill.

The normal dosage range of MasterRoc MF 510 admixture is 7 - 30 fl oz/ton (250 - 1000 mL/tonne) of total backfill. However, because of variations in backfill materials, jobsite conditions and/or applications, dosages outside of the recommended range may be required. In such cases, contact your local sales representative.

Dispensing and Mixing: MasterRoc MF 510 admixture can be dispensed directly into the water or the entire wetted out mixture. MasterRoc MF 510 admixture should not be dispensed directly onto the dry binder or with other admixtures.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of MasterRoc MF 510 admixture.

Compatibility: MasterRoc MF 510 admixture is compatible with most admixtures used in the production of quality backfill mixtures, including accelerators, retarders and extended-set control admixtures.

Do not use MasterRoc MF 510 admixture with admixtures containing beta-naphthalene sulfonate. Erratic behaviors in slump, workability retention and pumpability may be experienced.

Storage and Handling

Storage Temperature: MasterRoc MF 510 admixture must be stored at temperatures above 40 °F (5 °C). If MasterRoc MF 510 admixture freezes, thaw and reconstitute by mechanical agitation. Do not use pressurized air for agitation without consulting technical support.

Shelf Life: MasterRoc MF 510 admixture has a minimum shelf life of 9 months. Depending on storage conditions, the shelf life may be greater than stated. To ensure the longest shelf life potential, recirculation is recommended. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterRoc MF 510 admixture has been exceeded.

Packaging

MasterRoc MF 510 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterRoc MF 510 admixture

Additional Information

For additional information on MasterRoc MF 510 admixture, or its use in developing a backfill mixture with special performance characteristics, contact your local sales representative.

Master Builders Solutions creates technologies for the construction industry inspiring people to build better. We are active in ~40 countries and operate 35 production sites with over 1,600 employees. We develop, produce, and market high-quality chemical admixtures, as well as adjacent core technologies, to master the challenges of today and support a decarbonized future. Our people are pivotal and pair leading technologies and a strong brand heritage to surpass our customers' expectations and drive continuous value creation.

Limited Warranty Notice

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