

# MasterRoc<sup>®</sup> MF 70I

## High-performance backfill admixture

### Description

MasterRoc MF 70I ready-to-use, non-chloride liquid admixture is used for making more uniform and predictable high-performance backfill. MasterRoc MF 70I 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

Recommended for use in:

- 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 70I admixture is to stabilize and control the hydration of the binder portion of the backfill. Within the normal dosage range, MasterRoc MF 70I 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 70I 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 70I 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 70I admixture is recommended for use at a dosage of 6 to 20 fl oz per ton (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.

## Product Notes

**Corrosivity- Non-Chloride, Non-Corrosive:** MasterRoc MF 70I 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 70I 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 34 °F (1 °C) for MasterRoc MF 70I. If MasterRoc MF 70I admixture freezes, thaw at 35 °F (2 °C) or above and completely reconstitute by mild mechanical agitation. Do not use pressurized air for agitation.

**Shelf Life:** MasterRoc MF 70I 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 70I admixture has been exceeded.

## Packaging

MasterRoc MF 70I admixture is supplied in 55 gal (208 L), 275 gal (1040 L) totes and by bulk delivery.

## Related Documents

Safety Data Sheets: MasterRoc MF 70I admixture

## Additional Information

For more information on MasterRoc MF 70I admixture, 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

Master Builders Solutions Admixtures US, LLC ("Master Builders Solutions") warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. MASTER BUILDERS SOLUTIONS MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of Master Builders Solutions. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. MASTER BUILDERS SOLUTIONS WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on Master Builders Solutions' present knowledge and experience. However, Master Builders Solutions assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. Master Builders Solutions reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.