

03 37 13	Shotcrete
31 23 23	Backfill, Flowable Fill
31 32 33	Shotcrete Soil Slope Stabilization
31 33 33	Shotcrete For Rock Stabilization
31 74 19	Shotcrete Tunnel Lining

MasterRoc[®] MF 710

Dry, Powdered Hydration-Controlling Admixture for Shotcrete and Cemented Backfill

Description

MasterRoc MF 710 is a dry, powdered hydration-controlling admixture designed to extend set times in shotcrete and cemented backfill mixtures by controlling the hydration of cementitious materials (binders).

MasterRoc MF 710 meets the requirements of ASTM C494/C494M for Type B (retarding) and Type D (water-reducing and retarding) admixtures.

Applications

MasterRoc MF 710 is recommended for use in:

- Wet-mix shotcrete and dry-to-wet shotcrete
- Cemented paste fill
- Cemented hydraulic fill
- Cemented rock fill
- Cemented aggregate fill
- Geotechnical grouting and ground improvement

Features

- Extends set time
- Improves workability
- Reduces water demand for a given level of workability

Benefits

- Provides increased flexibility in shotcrete and mine backfill operations
- Economical solution for transporting shotcrete and backfill mixes over long distances
- Can improve compressive and flexural strength through reduced water demand

Technical Data

Property	Value
Form	Powder
Color	White
Bulk Density	112–150 lb/ft ³ (1800–2400 kg/m ³)
Water Solubility*	Partially soluble

*@ 68 °F (20 °C)

Values shown are typical and not to be construed as specifications.

Guidelines for Use

MasterRoc MF 710 may be used as a retarder in freshly batched shotcrete or cemented backfill mixes to extend working time and delay set. Within the normal dosage range, MasterRoc MF 710 typically extends working and setting times by approximately 1 to 5 hours compared to a reference mixture without admixture.

Set time is highly dependent on binder chemistry, aggregate characteristics, mixture proportions, and temperature. Field trials are required and must be conducted under anticipated job-site conditions to determine the dosage required to achieve the desired performance.

Dosage: The dosage of MasterRoc MF 710 depends on:

- Total cementitious material content (binder)
- Mixture temperature
- Desired set time extension

The normal dosage range is 0.8–1.3 oz/100 lb (23–38 g/100 kg) of total cementitious material (binder)

Dosage rates outside the recommended range may be used to achieve longer set times. Field trials must be conducted to confirm performance and final mixture properties.

Product Notes

Corrosivity: Non-Chloride, Non-Corrosive. MasterRoc MF 710 does not contain intentionally added calcium chloride or chloride-based ingredients. It will not initiate or promote corrosion of reinforcing steel in concrete.

Compatibility: MasterRoc MF 710 may be used in combination with other Master Builders Solutions admixtures. When used with other admixtures, each product must be dispensed separately into the mixture.

For guidance on evaluating MasterRoc MF 710 in specific shotcrete or backfill applications, contact your local Master Builders Solutions representative.

Storage and Handling

Storage Conditions: MasterRoc MF 710 should be stored in a dry, moisture-resistant environment at temperatures below 110 °F (43 °C).

Shelf Life: MasterRoc MF 710 has a minimum shelf life of 12 months when properly stored in unopened original packaging under recommended conditions.

If the product has exceeded its stated shelf life, contact your local Master Builders Solutions representative regarding suitability and dosage recommendations.

Safety and Handling: Observe standard precautions for handling chemical products. Wear appropriate personal protective equipment (PPE), including safety glasses and gloves. Wash hands before breaks and after work.

If MasterRoc MF 710 comes into contact with eyes or skin, immediately flush with water for 15 minutes. For skin contact, wash with soap and water. Remove contaminated clothing and wash before reuse.

Refer to the Safety Data Sheet (SDS) for complete health and safety information.

Packaging

MasterRoc MF 710 is supplied in:

- 44 lb (20 kg) moisture-resistant bags
- 2200 lb (1000 kg) moisture-resistant bulk bags

Related Documents

Safety Data Sheet (SDS): MasterRoc MF 710

Additional Information

For additional information on MasterRoc MF 710 or assistance developing a shotcrete or cemented backfill mixture with specialized performance characteristics, contact your local Master Builders Solutions representative.

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.