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| 03 30 00 | Cast-in-Place Concrete |
| 03 40 00 | Precast Concrete |
| 03 70 00 | Mass Concrete |
| 31 00 00 | Earthwork |

MasterRheobuild[®] 1000

High-Range Water-Reducing Admixture

Description

MasterRheobuild 1000 high-range, water-reducing admixture is formulated to produce rheoplastic concrete. Rheoplastic concrete flows easily, maintaining high plasticity for time periods longer than conventional superplasticized concrete. Rheoplastic concrete has the low water-cementitious materials ratio of no-slump concrete, providing excellent engineering (hardened) properties. The slump-retention characteristics of rheoplastic concrete permit the addition of MasterRheobuild 1000 admixture at the batch plant.

MasterRheobuild 1000 admixture meets ASTM C 494/C 494M requirements for Type A, water-reducing, and Type F, high-range water-reducing, admixtures.

Applications

Recommended for use in:

- Concrete where high plasticity, normal-setting characteristics and accelerated strengths are desired
- Prestressed, precast and ready-mixed concrete applications
- Civil and mining applications

Features

Plastic State:

- Increased slump, up to 11 in. (280 mm)
- Extended slump retention
- Controlled set times
- Cohesive and non-segregating
- Minimal bleed water

Hardened State:

- Higher earlier strengths than can be achieved with conventional high-range water reducers
- Increased ultimate compressive strength
- Higher modulus of elasticity
- Improved bond strength to steel
- Low permeability
- High durability
- Reduced shrinkage and creep
- Highly reliable in-place structural integrity

Benefits

- Less dependence on consolidation energy
- Job time and cost reduced through higher productivity rates and/or reduced labor
- Early strength allows for accelerated construction methods, resulting in completion dates ahead of schedule
- Engineering specification changes can allow for greater limits on the free-fall of concrete, lift heights, concrete temperatures and potential economic mixture adjustments

Performance Characteristics

Rate of Hardening: MasterRheobuild 1000 admixture is formulated to produce normal-setting characteristics throughout its recommended dosage range. Setting time of concrete is influenced by the chemical and physical composition of the basic ingredients of the concrete, temperature of the concrete and climatic conditions. Trial mixes should be made with job materials to determine the dosage required for a specified setting time and a given strength requirement.

Workability: Concrete containing MasterRheobuild 1000 admixture has the ability to maintain a rheoplastic state of 8-11 in. (200-280 mm) of slump if such workability is required. The precise duration of workability depends not only on temperature, but also on the type of cement, supplementary cementitious materials, mixture proportions, the nature of the aggregates, the method of transport and the dosage.

Guidelines for Use

Dosage: MasterRheobuild 1000 admixture can be used at a dosage rate up to 25 fl oz/cwt (1,625 mL/100 kg) of cementitious materials, depending upon the application and the desired increase in slump and strength. This dosage range applies for most concrete mixtures using typical concrete ingredients. However, variations in job conditions and concrete materials, such as silica fume, may require dosages outside the recommended dosage range desirable. In such cases, contact your local sales representative.

Mixing: Because slump retention is increased using MasterRheobuild 1000 admixture, it may be batched at the ready-mixed concrete plant. MasterRheobuild 1000 admixture can also be added at the jobsite to increase slump if desired. For directions on the proper evaluation and use of MasterRheobuild 1000 admixture in specific applications, contact your local sales representative.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterRheobuild 1000 admixture will neither initiate nor promote corrosion of reinforcing steel embedded in concrete, prestressing steel or of galvanized steel floor and roof systems. Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of MasterRheobuild 1000 admixture.

Compatibility: MasterRheobuild 1000 admixture may be used in combination with most Master Builders Solutions admixtures. When used in conjunction with other admixtures, each admixture must be dispensed separately into the mix. **MasterRheobuild 1000 admixture should not be used with MasterMatrix® UW 450, MasterMatrix VMA 358, MasterMatrix VMA 450, MasterPolyheed® 100, MasterPolyheed 1020, MasterPolyheed 1025, MasterPolyheed 1720, MasterPolyheed 1725 and MasterGlenium®-based high-range, water-reducing admixtures as erratic behaviors in slump, slump flow or pumpability may be experienced.**

Storage and Handling

Storage Temperature: MasterRheobuild 1000 admixture should be stored above freezing temperatures. If MasterRheobuild 1000 admixture freezes, thaw at 45 °F (7 °C) or above and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.**

Shelf Life: MasterRheobuild 1000 admixture has a minimum shelf life of 18 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 MasterRheobuild 1000 admixture has been exceeded.

Packaging

MasterRheobuild 1000 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

Related Documents

Safety Data Sheets: MasterRheobuild 1000 admixture

Additional Information

For additional information on MasterRheobuild 1000 admixture or its use in developing a concrete mixture with special characteristics, contact your local sales representative.

Master Builders Solutions, a brand of MBCC Group, is a global leader of innovative chemistry systems and formulations for construction, maintenance, repair and restoration of structures. The Admixture Systems business provides advanced products, solutions and expertise that improve durability, water resistance, energy efficiency, safety, sustainability and aesthetics of concrete structures, above and below ground, helping customers to achieve reduced operating costs, improved efficiency and enhanced finished products.

Utilizing worldwide resources, the Master Builders Solutions community of experts are passionate about providing solutions to challenges within all stages of construction, as well as the life cycle of a structure. At Master Builders Solutions we create sustainable solutions for construction around the globe.

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.

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