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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

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04 05 16 Masonry Grouting

MasterMatrix[®] VMA 362

Viscosity-Modifying Admixture

Description

MasterMatrix VMA 362 viscosity-modifying admixture (VMA) is a ready-to-use, liquid admixture that is specially developed for producing concrete with enhanced viscosity and controlled rheological properties. Concrete containing MasterMatrix VMA 362 admixture exhibits superior stability, thus increasing resistance to segregation and facilitating placement and consolidation. MasterMatrix VMA 362 admixture meets ASTM C 494/C 494M requirements for Type S, Specific Performance, admixtures.

Applications

Recommended for use in:

- Concrete containing “gap-graded” aggregates
- Lean concrete mixtures
- Concrete containing manufactured sand
- Concrete as a pumping aid
- Concrete as a finishing aid
- Concrete mixtures requiring “more body”
- Self-Consolidating Concrete (SCC)
- Liquid Sand program
- Pervious Concrete
- Self-Consolidating Grout

Features

- Modifies viscosity of concrete
- Thixotropic properties

Benefits

- Controls bleeding
- Provides flexibility in mixture proportioning and batching
- Provides concrete stability during transport and placement
- Reduces segregation, even with highly fluid concrete mixtures
- Facilitates placement of pervious concrete mixtures
- Enhances pumping and finishing
- Enhances surface appearance
- Provides superior and predictable in-place concrete properties
- Facilitates production of highly fluid concrete mixtures such as self-consolidating concrete (SCC)

Performance Characteristics

Setting Time: MasterMatrix VMA 362 admixture has little to no impact on concrete setting time within the recommended dosage range of 2 to 14 fl oz/cwt (130 to 910 mL/100 kg) of cementitious materials.

Compressive Strength: MasterMatrix VMA 362 admixture does not affect the compressive strength of concrete.

Viscosity: Concrete containing MasterMatrix VMA 362 admixture will exhibit an increase in viscosity with increasing dosage of the admixture. This desirable characteristic facilitates concrete placement, consolidation and finishing and provides stability to very fluid concrete mixtures.

Workability: Because of its thixotropic properties, concrete containing MasterMatrix VMA 362 admixture can increase in viscosity if left in a mixing vessel without agitation. Workability can be restored by simply remixing the concrete mixture.

Air Content: MasterMatrix VMA 362 admixture does not affect the air content in either air-entrained or non-air-entrained concrete. Typical dosages of air-entraining admixtures may be used to achieve the desired air content.

Guidelines for Use

Dosage: To provide stability in self-consolidating concrete (SCC) mixtures, the recommended dosage for MasterMatrix VMA 362 admixture is up to 14 fl oz/cwt (910 mL/100 kg) of cementitious materials. For other concrete mixtures that require "more body" to facilitate pumping and finishing, a dosage of up to 6 fl oz/cwt (390 mL/100 kg) is recommended. Because of variations in concrete materials, job site conditions and/or applications, dosages outside of the suggested range may be required. In such cases, contact your local sales representative.

Mixing: MasterMatrix VMA 362 admixture is typically added with the initial mix water. Alternately, MasterMatrix VMA 362 admixture may be added after all other concreting ingredients have been batched and thoroughly mixed, either at the batch plant or at the jobsite.

Product Notes

Corrosivity – Non-Chloride, Non-Corrosive: MasterMatrix VMA 362 admixture will neither initiate nor promote corrosion of reinforcing and prestressing steel embedded in concrete, or of galvanized steel floor and roof systems. Neither calcium chloride nor other chloride-based ingredients are used in the manufacture of this admixture.

Compatibility: MasterMatrix VMA 362 admixture is compatible with most admixtures used in the production of quality concrete including normal, mid-range and high-range water-reducing admixtures and air entrainers. MasterMatrix VMA 362 admixture is also compatible with typical accelerators, retarders, extended set-control admixtures, corrosion inhibitors, and shrinkage reducers. However, a field trial mixture is recommended to ensure appropriate performance.

Storage and Handling

Storage Temperature: MasterMatrix VMA 362 admixture must be stored at temperatures above 32 °F (0 °C) and below 130 °F (54 °C). Protect MasterMatrix VMA 362 admixture from freezing because it cannot be reconstituted after thawing.

Shelf Life: A product stability evaluation has shown that MasterMatrix VMA 362 admixture has a shelf life of 8 months. Please contact your local sales representative regarding suitability for use and dosage recommendations if the stated minimum shelf life of MasterMatrix VMA 362 admixture has been exceeded.

Dispensing: MasterMatrix VMA 362 admixture should be dispensed using direct-feed dispensing systems. It is recommended that fail-safe features must be included in this dispenser application for potential meter malfunctions. Consult your local sales representative for the proper dispensing equipment for MasterMatrix VMA 362 admixture.

Packaging

MasterMatrix VMA 362 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes, and by bulk delivery.

Related Documents

Safety Data Sheets: MasterMatrix VMA 362 admixture

Additional Information

For additional information on MasterMatrix VMA 362 admixture or its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

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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

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