

3	03 30 00	Cast-in-Place Concrete
	03 40 00	Precast Concrete
4	03 70 00	Mass Concrete
	04 05 16	Masonry Grouting

MasterMatrix® VMA 358

Viscosity-Modifying Admixture

Description

MasterMatrix VMA 358 organic, viscosity-modifying admixture (VMA) is a ready-to-use, liquid admixture developed for producing concrete with enhanced viscosity and controlled rheological properties. Concrete with MasterMatrix VMA 358 admixture exhibits superior stability, thus increasing resistance to segregation and facilitating placement.

MasterMatrix VMA 358 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

Benefits

- Controls bleeding
- Reduces segregation, even with highly fluid concrete mixtures
- Enhances pumping and finishing
- Reduces sagging, helping plastic concrete maintain its shape on slopes and arches
- Facilitates production of highly fluid concrete mixtures such as SCC
- Facilitates placement of pervious concrete mixtures
- Superior and predictable in-place concrete properties
- Enhances surface appearance
- Flexibility in mixture proportioning
- Provides concrete stability during transport and placement

Performance Characteristics

Setting Time: MasterMatrix VMA 358 admixture has little to no impact on concrete setting time within the recommended dosage range of 2 to 10 fl oz/cwt (130 to 650 mL/100 kg) of cementitious materials.

Compressive Strength: MasterMatrix VMA 358 admixture does not affect the compressive strength of concrete. Slight increases in compressive strength have, however, been noted in SCC mixtures containing MasterMatrix VMA 358 admixture.

Workability: A slight decrease in slump or slump flow may be noted after the addition of MasterMatrix VMA 358 admixture due to the increase in concrete viscosity. If necessary, the slight decrease in slump or slump flow can be offset easily by a minor increase in water-reducing or high-range water-reducing admixture dosage. Very high slump flows can be achieved in SCC produced with MasterMatrix VMA 358 admixture.

Slump Retention: In general, the slump retention characteristic of concrete mixtures containing MasterMatrix VMA 358 admixture is similar to that of plain concrete.

Air Content: Typical dosages of air-entraining admixtures may be used to achieve the desired air content when using MasterMatrix VMA 358 admixture.

Guidelines for Use

Dosage: The recommended dosage range for MasterMatrix VMA 358 admixture is 2 to 10 fl oz/cwt (130 to 650 mL/100 kg) of cementitious materials for most concrete mixtures. A dosage of 2 to 6 fl oz/cwt (130 to 390 mL/100 kg) is recommended for typical concrete mixtures requiring “more body” to facilitate pumping and finishing procedures. A dosage of up to 10 fl oz/cwt (650 mL/100 kg) is recommended to provide stability in self-consolidating concrete mixtures. Because of variations in concrete materials, jobsite conditions and/or applications, dosages outside of the recommended range may be required.

Mixing: MasterMatrix VMA 358 admixture is typically added with the initial mix water. Alternately, MasterMatrix VMA 358 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

Compatibility: Do not use MasterMatrix VMA 358 admixture with admixtures containing beta-naphthalene sulfonate such as MasterRheobuild® 1000 admixture. Erratic behaviors in slump, slump flow and pumpability may be experienced. MasterMatrix VMA 358 admixture is compatible with most other admixtures used in the production of quality concrete including normal, mid-range and high-range water-reducing admixtures, air entrainers, accelerators, retarders, extended set-control admixtures, corrosion inhibitors and shrinkage reducers. However a field trial is recommended to ensure appropriate performance.

Storage and Handling

Storage Temperature: MasterMatrix VMA 358 admixture must be stored at temperatures above 41 °F (5 °C) to avoid dispensing difficulties due to thickening. Do not allow MasterMatrix VMA 358 admixture to freeze since it cannot be reconstituted after thawing.

Shelf Life: MasterMatrix VMA 358 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 MasterMatrix VMA 358 admixture has been exceeded.

Dispensing: Consult your local sales representative for the proper dispensing equipment for MasterMatrix VMA 358 admixture. If dispensing directly from the 55 gal (208 L) drum, it is recommended that the larger 2 in. (50 mm) opening be used.

Packaging

MasterMatrix VMA 358 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 358 admixture

Additional Information

For additional information on MasterMatrix VMA 358 admixture or on its use in developing concrete mixtures with special performance characteristics, contact your local sales representative.

The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.

Limited Warranty Notice

BASF 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. BASF 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 BASF. 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. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

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