

3	03 30 00	Cast-in-Place Concrete
32	03 40 00	Precast Concrete
	32 13 13	Concrete Paving

MasterFiber[®] MAC 360 FF

Synthetic Hybrid Fiber with Optimum Finishing Performance

Description

MasterFiber MAC 360 FF, a synthetic hybrid fiber, is manufactured from a proprietary blend of polypropylene resins for use in making fiber-reinforced concrete in compliance with the requirements of ASTM D 7508/D 7508M, ASTM C 1116/C 1116M "Standard Specification for Fiber-Reinforced Concrete."

Applications

Typical applications include, but are not limited to, the following:

- Hard-troweled concrete
- Industrial and warehouse slabs-on ground
- Residential and commercial slabs-on-ground
- Concrete pavements, white-topping and overlays
- Composite metal decks
- Architectural panels

Features

MasterFiber MAC 360 FF hybrid fiber is a blend of synthetic micro- and macrofibers engineered for use as shrinkage and temperature (secondary) reinforcement and, specifically, to provide optimum finishing performance in hard-troweled concrete applications. MasterFiber MAC 360 FF hybrid fiber has also been engineered to provide post-crack flexural performance equivalent to that provided by most commercially-available synthetic macrofibers, at equal dosages. MasterFiber MAC 360 FF hybrid fiber has the following features:

- Uniform distribution throughout the concrete matrix
- Exceptional finishability
- Improves green strength
- Exceptional post-crack flexural performance
- Alkali resistant and rust proof

Benefits

- Enhances aesthetics and eliminates the potential for rust stains
- Eliminates the need for welded-wire reinforcement (VWR) and conventional steel bars used as shrinkage and temperature reinforcement, depending on application
- Provides effective tight crack control
- Permits earlier stripping of forms, with less rejection
- Minimizes plastic shrinkage and settlement cracking
- Enhances impact and shatter resistance
- Enhances durability
- Reduces construction time and overall labor and material costs

Performance Characteristics

Typical Physical Properties (macrofiber component)

Specific Gravity	0.91
Melting Point	320 °F (160 °C)
Ignition Point	1,094 °F (590 °C)
Absorption	Nil
Alkali Resistance	Excellent
Tensile Strength	85 ksi (585 MPa)
Length	2.0 in. (50 mm)
Aspect Ratio	83

Guidelines for Use

Dosage: The recommended minimum dosage for MasterFiber MAC 360 FF hybrid fiber is 3 lb/yd³ (1.8 kg/m³). For most applications, the recommended dosage will be in the range of 3 to 7.5 lb/yd³ (1.8 to 4.5 kg/m³). However, depending on the specific application, a higher dosage may be recommended by Master Builders Solutions. For composite metal deck-slab applications, subject to specifier approval on the basis of equivalent post-crack flexural performance as provided in the MasterFiber MAC 360 FF hybrid fiber Specifier Information technical note, Master Builders Solutions recommends a dosage of 4 lb/yd³ (2.4 kg/m³). In lieu of this approval, the dosage of MasterFiber MAC 360 FF hybrid fiber in composite metal deck-slab applications is 4.3 lb/yd³ (2.5 kg/m³), based on the requirements specified in ANSI/SDI C-2017 Standard for Composite Steel Floor Deck-Slabs.

Mixing: MasterFiber MAC 360 FF hybrid fiber is packaged in pre-weighed, ready-to-use, degradable bags which are designed to be introduced at any time before or during mixing of concrete produced in accordance with procedures specified in ASTM C 94/C 94M.

Suggested Specification Language

Synthetic hybrid fiber: Polyolefin hybrid fibers engineered and designed for use in making fiber-reinforced concrete complying with ASTM C1116/C1116M, Type III; MasterFiber MAC 360 FF hybrid fiber by Master Builders Solutions.

Storage and Handling

Storage Temperature: MasterFiber MAC 360 FF hybrid fiber should be stored in a clean, dry area at temperatures below 140 °F (60 °C). Avoid storing near strong oxidizers and sources of ignition. Use caution when stacking to avoid unstable conditions. Store in a sprinkled warehouse.

Packaging

MasterFiber MAC 360 FF hybrid fiber is packaged in pre-weighed degradable 2.2-lb (1.0-kg), 3-lb (1.36-kg), 4-lb (1.81-kg), and 5-lb (2.27-kg) bags that can be added directly to the mixing system.

Related Documents

Safety Data Sheets: MasterFiber MAC 360 FF hybrid fiber

Specifier Information Technical Note: MasterFiber MAC 360 FF hybrid fiber

Additional Information

For additional information on the MasterFiber MAC 360 FF hybrid fiber, 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.



MasterFiber MAC 360 FF fiber, as marketed by Master Builders Solutions, is classified by Underwriters Laboratories Inc. for use in the following fire rated assemblies: UL D700, D800 and D900 Series Designs. Fibers to be added to the concrete mix at a maximum rate of 5.0 lb of fiber for each cubic yard (3.0 kg/m³) of concrete.