

3	03 30 00	Cast-in-Place Concrete
3	03 40 00	Precast Concrete
	32 70 00	Mass Concrete
1	31 74 16	Precast Concrete Tunnel Lining



MasterFiber® 516

Type I Steel Fiber

Description

MasterFiber 516 product is a low carbon, cold-drawn wire fiber manufactured in compliance with ASTM A820/A820M “Standard Specification for Steel Fibers for Fiber-Reinforced Concrete”. MasterFiber 516 product can be used in producing Type I Steel Fiber-Reinforced Concrete meeting the requirements of ASTM C1116/C1116M “Standard Specification for Fiber-Reinforced Concrete”.

Applications

Recommended for use in:

- Industrial flooring
- Commercial flooring
- Residential foundations
- Basement walls
- Pavements
- Compression layers
- Precast tunnel segments
- Mass concrete
- Overlays
- Footings/Foundations
- Precast elements

Features

- Uniform distribution throughout the concrete matrix
- Loose fibers specially designed to avoid balling problems

Benefits

- Provides effective crack control
- Provides uniform shrinkage and temperature reinforcement
- Can be used as the primary reinforcement, depending on the application
- Provides excellent control of settlement cracking
- Reduces construction time and overall labor and material costs
- Increases flexural toughness, impact and shatter resistance
- Can help reduce concrete thickness required
- Can be used for shear resistance in accordance with ACI CODE-318-19 Building Code Requirements for Structural Concrete
- Provides higher energy absorption and increases concrete ductility
- Facilitates sustainable construction

Performance Characteristics

Typical Physical Properties

Specific Gravity	7.85
Length	2.0 in. (50 mm)
Nominal Aspect Ratio	50
Tensile Strength	≥ 160 ksi (1100 MPa)



Guidelines for Use

Dosage: For most applications, the typical recommended dosage will be in the range of 15 to 80 lb/yd³ (9 to 48 kg/m³). However, depending on the specific application, dosages outside of the typical range and as high as 200 lb/yd³ (120 kg/m³) may be required. Please contact your local sales representative, if dosages outside the recommended range are required.

Mixing: Never add fibers as the first component in the mixer or during the addition of cementitious materials. Fiber bags should be opened, and the fibers introduced together with sand and coarse aggregates.

Suggested Specification Language

Steel fiber shall meet the requirements of ASTM A820/ C820M, Type I steel fiber and designed for use in making fiber-reinforced concrete complying with ASTM C1116/ C1116M. Product shall be MasterFiber 516 by Master Builders Solutions.

Storage and Handling

Storage Temperature: MasterFiber 516 product should be stored in a clean, dry area. Avoid storing near wet and high humidity areas. Use caution when stacking to avoid unstable conditions.

Packaging

MasterFiber 516 product is packaged in 44 lb (20 kg) bags.

Related Documents

Safety Data Sheet: MasterFiber MAC 244 product

Additional Information

For additional information on the MasterFiber 516 product, contact your local sales representative.

Master Builders Solutions, 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.

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