

3	03 30 00	<b>Cast-in-Place Concrete</b>
	03 40 00	<b>Precast Concrete</b>
	03 70 00	<b>Mass Concrete</b>
	03 37 13	<b>Shotcrete</b>
31	31 74 16	<b>Precast Concrete Tunnel Lining</b>

# MasterFiber® 511

## Type I Steel Fiber

### Description

MasterFiber 511 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 511 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
- Final tunnel lining
- Mass concrete
- Overlays
- Footings/Foundations
- Precast elements
- Shotcrete

### Features

- Uniform distribution throughout the concrete matrix
- Loose fibers specially designed to avoid balling problems
- Excellent placement and finishability

### Benefits

- Effective tight crack control
- Provides excellent control of settlement cracking
- Provides uniform shrinkage and temperature reinforcement
- Can be used as the primary reinforcement, depending on the application
- 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	1.38 in. (35 mm)
Nominal Aspect Ratio	65
Tensile Strength	≥ 189 ksi (1300 MPa)

### Guidelines for Use

**Dosage:** For most applications, the typical recommended dosage will be in the range of 15 to 80 lb/yd<sup>3</sup> (9 to 48 kg/m<sup>3</sup>). However, depending on the specific application, dosages outside of the typical range and as high as 200 lb/yd<sup>3</sup> (120 kg/m<sup>3</sup>) 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/ A820M Type I steel fiber and designed for use in making fiber-reinforced concrete complying with ASTM C1116/ C1116M. Product shall be MasterFiber 511 by Master Builders Solutions.

## Storage and Handling

**Storage Temperature:** MasterFiber 511 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 511 product is packaged in 44 lb (20 kg) bags.

## Additional Information

For additional information on the MasterFiber 511 product, contact your local sales representative.

*Master Builders Solutions is a leading global manufacturer of concrete admixtures, as well as other sustainable solutions for the construction industry, focused on delivering its vision: Inspiring people to build better. Master Builders Solutions provides value-added technology and market-leading R&D capabilities to improve the performance of construction materials and to enable the reduction of CO2 emissions in the production of concrete. Founded in 1909, Master Builders Solutions has ca. 1600 employees operating 35 production sites globally, supporting their customers in mastering their building challenges of today – for a decarbonized future.*

## Limited Warranty Notice

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