



# MasterFiber® Product Guide

## Advanced Technologies for Fiber Reinforced Concrete



Leading edge concrete reinforcement



From light residential



To large commercial slabs

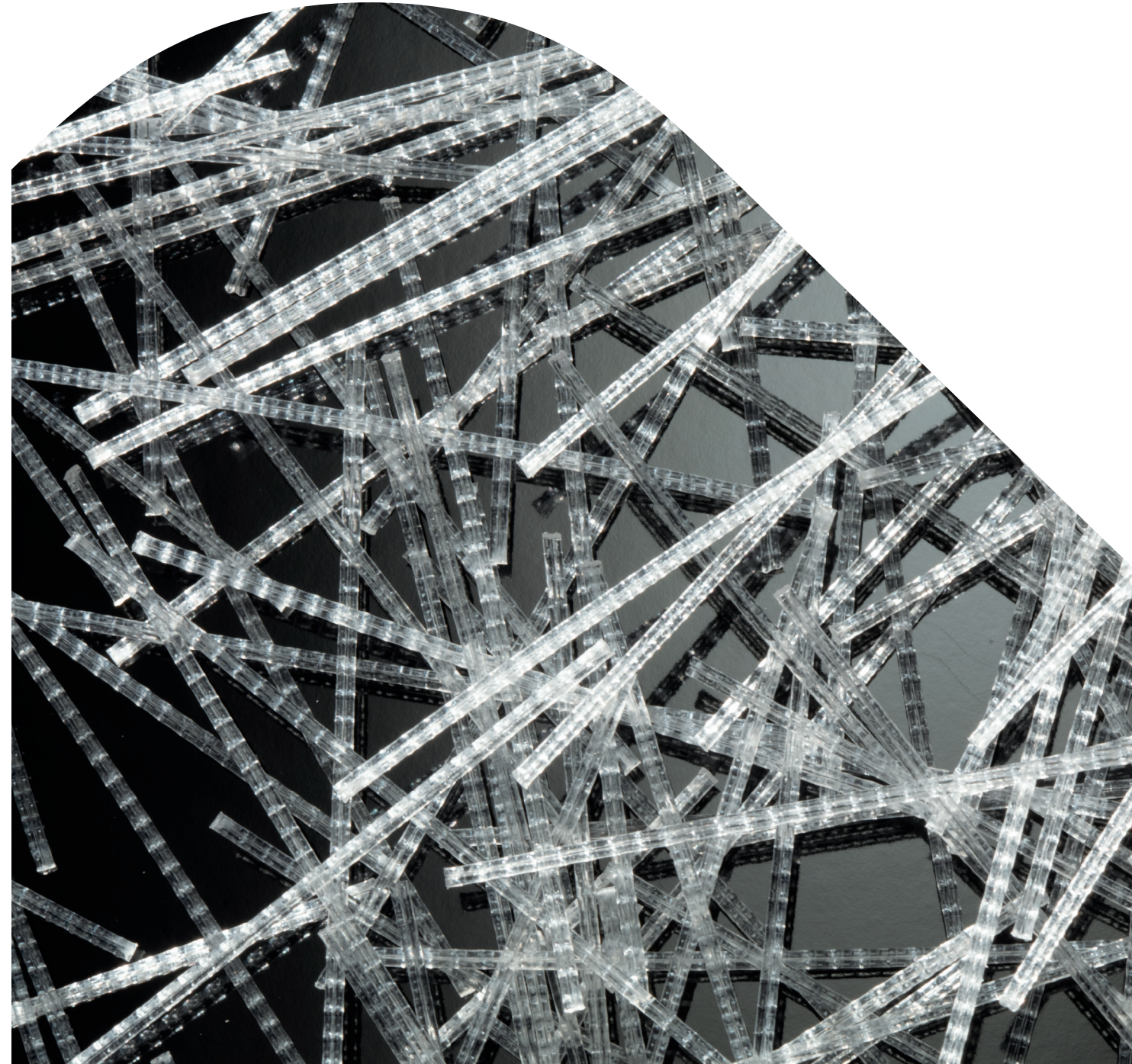
MasterFiber MAC 360 FF hybrid fiber is a key ingredient in our unique MB Slab® System with Extended Joint Spacing.



**Our expertise is part of the mix**  
Our Technical Center is one of the world's largest facilities dedicated to the science of concrete technology—with analytical and physical concrete testing equipment in 20 laboratories including six walk-in humidity and/or temperature-controlled rooms. Master Builders Solutions brings over 100 years of concrete innovation to you.



- Tools & Support**
- Concrete Now! App with Fiber Dosage Wizard
  - Industry's largest service and support network
  - Concrete mixture design and optimization
  - Dedicated engineering services team
  - Technical support: 1-800-628-9990



### About Master Builders Solutions

Master Builders Solutions is a leading global manufacturer of concrete admixtures, as well as other sustainable solutions for the construction industry, focussed 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 decarbonised future.

**Master Builders Solutions Admixtures US, LLC**  
23700 Chagrin Boulevard  
Beachwood, OH 44122 USA  
(800) 628-9990

[master-builders-solutions.com/en-us](https://master-builders-solutions.com/en-us)  
[admixtures@masterbuilders.com](mailto:admixtures@masterbuilders.com)

**Master Builders Solutions Canada, Inc**  
1800 Clark Boulevard  
Brampton, Ontario L6T 4M7 CANADA  
(289) 360-1300



# Forget steel. Go with synthetic fiber technology.

There's a better, more modern way to reinforce concrete and effectively control cracking throughout its life cycle. By incorporating our latest advances in synthetic fiber technology, MasterFiber® high-performance fibers provide significant advantages compared to the use of traditional secondary steel reinforcement. And the benefits come in many forms.

## Cost savings

MasterFiber products can eliminate the need for secondary steel reinforcement. This not only saves on material costs, but also the skilled labor required for setup and the associated heavy equipment at the job site. These savings can be significant.

## Saves time on the job

In addition to eliminating steel setup time, scheduling is improved since there's no need to factor in time required to move reinforcement bundles around the job site, freeing up space and labor for other tasks and accelerating concrete placement.

## Enhanced safety

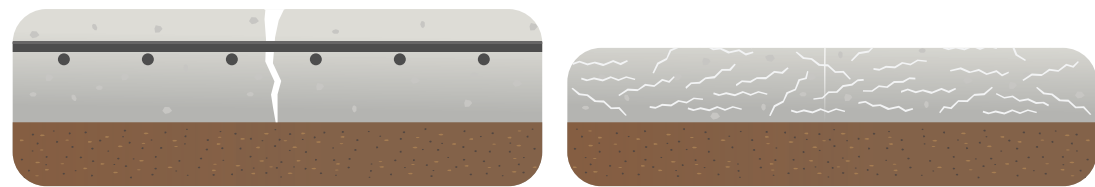
By replacing secondary steel reinforcement, MasterFiber products can help improve worker safety and reduce contractor liability by eliminating injuries that can occur with welded-wire mesh and steel bar setup and installation.

## Improved durability

For prolonged service life, MasterFiber technologies significantly reduce or eliminate plastic shrinkage and settlement cracking, and hold cracks tight for post-crack performance. Flexural toughness is also improved, along with impact resistance and overall durability.

## Finishability and aesthetics

By eliminating the use of secondary steel reinforcement, there's no chance of unsightly corrosion at the concrete surface. When the job requires it, select MasterFiber products deliver a beautiful, smooth final appearance. Contractors and owners alike appreciate the enhanced aesthetics of a MasterFiber reinforced concrete slab, thanks to superior finishability.



## Steel vs. Fiber reinforcement




Compared to the 2-dimensional nature of traditional secondary steel reinforcement, MasterFiber synthetic fibers distribute evenly throughout the mix to provide significantly tighter crack control and stronger, 3-dimensional reinforcement throughout finished concrete.

# MasterFiber Crack Control Technology

## Four levels of performance to choose from.


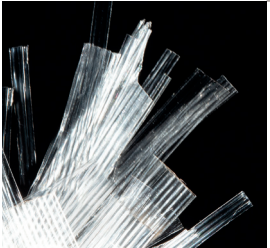
### Early Age Crack Control—Monofilament Microfibers

These polyolefin microfibers reinforce the concrete while in its plastic stage to significantly reduce early age shrinkage cracking. Plastic settlement is also reduced, allowing the bleed water to rise to the surface evenly and enhancing durability.

Monofilament Microfibers	Key Features	Applications
 <b>MasterFiber M 70</b>	<ul style="list-style-type: none"> <li>Excellent reduction in plastic shrinkage cracking</li> </ul>	<ul style="list-style-type: none"> <li>Residential/Commercial slabs-on-ground</li> <li>Decks and patios, pool decks</li> <li>Driveways/sidewalks</li> </ul>
 <b>MasterFiber M 35</b>	<ul style="list-style-type: none"> <li>Reduces plastic settlement and plastic shrinkage cracking</li> <li>Easily distributes throughout concrete</li> </ul>	<ul style="list-style-type: none"> <li>Residential/Commercial slabs-on-ground</li> <li>Sidewalks</li> <li>Pools and decks</li> <li>Manufactured concrete products</li> </ul>
 <b>MasterFiber M 100</b>	<ul style="list-style-type: none"> <li>Excellent fiber finishability</li> <li>Superior plastic shrinkage crack control</li> <li>Ideal for hot, dry or windy weather conditions</li> </ul>	<ul style="list-style-type: none"> <li>Residential/Commercial slabs-on-ground</li> <li>Driveways/sidewalks</li> <li>Topping slabs</li> <li>Thin concrete applications</li> <li>Fire spalling applications</li> </ul>


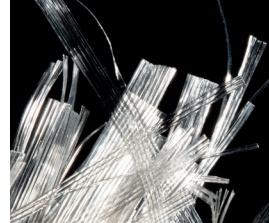


### Moderate Crack Control—Fibrillated Microfibers

With their fishnet-like design, these polyolefin fibers create a fibrillation network with increased bonding between the paste and aggregate interface. This works to significantly reduce plastic settlement shrinkage, early age cracking and eliminates the need for light-gauge welded-wire reinforcement. Overall green strength is also improved.

Fibrillated Microfibers	Key Features	Applications
 <b>MasterFiber F 70</b>	<ul style="list-style-type: none"> <li>Replaces light-gauge welded-wire reinforcement</li> </ul>	<ul style="list-style-type: none"> <li>Ultra-thin white topping/overlays</li> <li>Architectural precast</li> <li>Slope stabilization</li> <li>Residential slabs</li> <li>Light commercial slabs</li> <li>Irrigation drainage systems</li> </ul>
 <b>MasterFiber F 100</b>	<ul style="list-style-type: none"> <li>Reduces plastic settlement shrinkage cracking</li> <li>Replaces light-gauge welded-wire reinforcement</li> <li>Improves green strength</li> </ul>	<ul style="list-style-type: none"> <li>Residential/Commercial slabs-on-ground</li> <li>White topping/overlays</li> <li>Precast steps and other products</li> <li>Statuaries/ornamentals</li> <li>Marine and farm elements</li> <li>Stucco</li> <li>Wall systems</li> </ul>


### Secondary Reinforcement—Macrofibers

With their longer length and higher tensile strength properties, this blend of polyolefin resins bridge drying shrinkage cracks and bond more securely within the concrete. This enhances post-crack performance and eliminates the need for conventional secondary steel reinforcement, including welded-wire fabric and light gauge bar.

Macrofibers	Key Features	Applications
 <b>MasterFiber MAC 100</b>	<ul style="list-style-type: none"> <li>Enhances post-crack performance</li> <li>Eliminates the need for welded-wire and small diameter bars used as secondary reinforcement</li> </ul>	<ul style="list-style-type: none"> <li>Commercial slabs</li> <li>Industrial and warehouse floors</li> <li>Composite metal decks</li> <li>White topping/overlays</li> <li>Pavements</li> <li>Utility precast</li> </ul>
 <b>MasterFiber MAC 100 PLUS</b>	<ul style="list-style-type: none"> <li>Enhances post-crack performance</li> <li>Eliminates the need for welded-wire and small diameter bars used as secondary reinforcement</li> </ul>	<ul style="list-style-type: none"> <li>Commercial slabs</li> <li>Industrial and warehouse floors</li> <li>Composite metal decks</li> <li>Bridge decks</li> <li>Utility precast</li> <li>White topping/overlays</li> </ul>
 <b>MasterFiber MAC 2200 CB</b>	<ul style="list-style-type: none"> <li>Chemically enhanced fiber exhibits superior bonding to cementitious matrices</li> <li>Eliminates the need for welded-wire and small diameter bars used as secondary reinforcement</li> </ul>	<ul style="list-style-type: none"> <li>Slabs-on-ground</li> <li>Bridge decks</li> <li>Pavements</li> <li>White topping/overlays</li> </ul>
 <b>MasterFiber MAC MATRIX</b>	<ul style="list-style-type: none"> <li>Increases flexural toughness and impact resistance</li> <li>Effective tight crack control</li> <li>Eliminates the need for welded-wire and small diameter bars used as secondary reinforcement</li> </ul>	<ul style="list-style-type: none"> <li>Exterior pavements</li> <li>Composite metal decks</li> <li>Industrial floors</li> <li>Tunnel linings, Shotcrete</li> <li>Concrete pipe</li> <li>Marine structures</li> <li>Utility precast elements</li> <li>Wall systems</li> </ul>

### Enhanced Crack Control System—Hybrid Fibers

Hybrid polyolefin-based technology combines micro and macrofibers to provide the optimum performance in finishability, final appearance and crack control. Non-structural cracking is controlled at all ages, eliminating the need for both welded-wire or small diameter bars used as secondary reinforcement. Hybrid fibers represent an ideal crack solution for virtually any type of slab application, including polished interior floors.

Hybrid Fibers	Key Features	Applications
 <b>MasterFiber MAC 360 FF</b>	<ul style="list-style-type: none"> <li>Provides exceptional finishability</li> <li>Eliminates the need for welded-wire and small diameter bars used as secondary reinforcement</li> <li>Exceptional post-crack flexural performance</li> </ul>	<ul style="list-style-type: none"> <li>Polished interior floors</li> <li>Interior and exterior slabs</li> <li>Industrial and warehouse floors</li> <li>Composite metal decks</li> <li>Bridge decks</li> <li>Overlays and paving</li> </ul>