

03 30 00	Cast-in-Place Concrete
03 40 00	Precast Concrete
03 70 00	Mass Concrete

MasterFiber® F 70

Fibrillated Microsynthetic Fiber

Description

MasterFiber F 70 product, a microsynthetic fiber, is a fibrillated polypropylene fiber manufactured from 100% virgin homopolymer polypropylene resins. MasterFiber F 70 product meets the requirements of ASTM D 7508/D 7508M, ASTM C 1116/C 1116M, Section 4.1.3, Type III, and Note 2 and the requirements of ICC ES AC308 Sections 3.1.1 (plastic shrinkage reinforcement) and 3.1.2 (shrinkage and temperature reinforcement).

Applications

Recommended for use in:

- Residential and commercial slabs-on-ground
- Ultra-thin whitetopping
- Bonded overlays
- Architectural precast products and ornamental elements
- Slope stabilization
- Water treatment plants
- Irrigation ditches/channels

Features

- Excellent distribution
- Excellent shrinkage and temperature reinforcement

Benefits

- Replacement for typical light gauge welded-wire reinforcement [6 x 6 W1.4 x W1.4 (152 x 152 MW9.1 x MW9.1)], depending on the application
- Modifies macro-cracking and micro-cracking mechanisms
- Reduces plastic settlement
- Extends service life with reduced maintenance
- Enhances fatigue strength
- Enhances impact, pullout and surface abrasion resistance
- Reduces permeability

Performance Characteristics

Physical Properties

Specific Gravity	0.91
Melting Point	320 °F (160 °C)
Ignition Point	1,094 °F (590 °C)
Absorption	Nil
Alkali Resistance	Excellent
Tensile Strength	44,000 psi (300 MPa)
Modulus of Elasticity	780 ksi (5.38 GPa)
Available Lengths	0.75 in. (19 mm) and 1.5 in. (38 mm)
Equivalent Diameter	0.026 in. (0.66 mm)

Guidelines for Use

Dosage: The recommended dosage of MasterFiber F 70 product is 1.5 lb/yd³ (0.9 kg/m³).

In accordance with the recommendations of the Steel Deck Institute, fibrillated microsynthetic fibers, including MasterFiber F 70 product, should not be used to replace welded-wire reinforcement in composite metal decks.

Mixing: The bags can be introduced at any time during the mixing cycle, except at the same time as the cement. Three to five minutes of mixing will be required to disperse the fibers depending on when the product is added to the mixer.

Engineering Specifications

MasterFiber F 70 product, at 1.5 lb/yd³ (0.9 kg/m³), is an option to conventional secondary reinforcement in structural plain concrete. MasterFiber F 70 product outperforms other microsynthetic fibers in providing an optimum three-dimensional shrinkage and temperature reinforcement system in concrete.

MasterFiber F 70 product meets the requirements of ASTM D 7508/D 7508M, ASTM C 1116/C 1116M, Section 4.1.3, Type III, and Note 2, and ICC ES AC32, Sections 3.1.1 and 3.1.2.

Product Notes

MasterFiber F 70 product is not a replacement for structural steel reinforcement and therefore, should not be used to replace any of the load-carrying steel reinforcement in a concrete element.

Packaging

MasterFiber F 70 product is packaged in pre-weighed degradable 1.0 lb (0.45 kg), 1.5 lb (0.7 kg) and 7.5 lb (3.4 kg) bags that can be added directly to the mixing system.

Related Documents

Safety Data Sheets: MasterFiber F 70 product

Additional Information

For additional information on MasterFiber F 70 product, 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

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