

# FIBERCAST® 510

## PRODUCT DATA SHEET



### FIBERCAST® 510 MACRO-SYNTHETIC FIBER BLEND

Fibercast 510 secondary reinforcement system for concrete—a blend of polypropylene/polyethylene high performance macro-monofilament fibers with patented sinusoidal deformations and 100 percent virgin polypropylene micro-synthetic fibers containing no reprocessed olefin materials. Engineered and manufactured in an ISO 9001:2000 certified facility for use as concrete reinforcement at a minimum addition rate of 5 lb/yd<sup>3</sup> (3.0 kg/m<sup>3</sup>). Complies with ASTM C III6/C III6M, Type III fiber reinforced concrete.

### ADVANTAGES

Requires no minimum amount of concrete cover • Is always positioned in compliance with codes • Safe and easier to use than traditional reinforcement • Saves time and hassle

### FEATURES & BENEFITS

- Macro-synthetic and micro-synthetic fiber blend for secondary reinforcement
- Inhibits formation of plastic shrinkage and plastic settlement cracks
- Provides impact, abrasion and shatter resistance
- Lowered water migration
- Provides higher levels of residual strength
- Provides improved durability
- Provides increased green strength
- Control of drying shrinkage and temperature cracking
- Good finishing characteristics
- Pumpable reinforcement

### PRIMARY APPLICATIONS

Applicable to all types of concrete which demonstrate a need for toughness, resistance to intrinsic cracking and improved water tightness.

- Septic tanks
- Manhole cones and risers
- Statuaries
- Agricultural products
- Marine products
- Hazardous material storage
- Utility structures
- Burial vaults

### CHEMICAL AND PHYSICAL PROPERTIES:

#### Polypropylene Component:

Absorption	Nil
Specific Gravity	0.91
Fiber Length	Multi-Design Gradation
Electrical Conductivity	Low
Melt Point	324°F (162°C)

#### Coarse Macro-Monofilament Polypropylene Component:

Absorption	Nil
Specific Gravity	0.91
Nominal Filament Diameter	0.033 in (0.83 mm)
Fiber Length	2.0 in (50 mm)
Electrical Conductivity	Low
Melt Point	328°F (164°C)

### DO SPECIFY FIBERCAST 510 FIBERS:

- Reduced plastic shrinkage cracking
- Alternative to traditional steel for temperature/shrinkage and flexural reinforcement
- Improved impact, shatter and abrasion resistance
- Improved residual strength
- Reduced water migration and damage from freeze/thaw
- Improved durability
- Improved green strength

### DO NOT SPECIFY FIBERCAST 510 FIBERS:

- Replacing structural levels of steel reinforcement

# FIBERCAST® 510

## PRODUCT USE

**MIXING DESIGNS AND PROCEDURES:** Fibercast® 510 reinforcing is a mechanical, not a chemical process. The addition of Fibercast 510 fibers does not require additional water or other mix design changes at normal rates. Fibercast 510 degradable bags should be added to the mixer with the coarse aggregate. Complete dispersion of fibers requires maximum shear and turbulence. Therefore, actual mix time to ensure complete dispersion of the fibers should be carefully monitored.

**FINISHING:** Fibercast 510 reinforced concrete can be finished with normal finishing techniques.

**APPLICATION RATE:** The standard application rate for Fibercast 510 is 5 lbs per cubic yard (3.0 kg/m<sup>3</sup>) of concrete.

## GUIDELINES

Fibercast 510 should not be used to replace structural, load-bearing reinforcement. Fibercast 510 fibers should not be used as a means of using thinner concrete sections than original design.

## COMPATIBILITY

Fibercast 510 is compatible with all commonly used concrete admixtures and performance enhancing chemicals.

## PACKAGING

Fibercast 510 fibers are available in 1 lb degradable bags. The macro-monofilament fiber is collated in small bundles within the degradable bag for rapid distribution. Fibercast 510 fibers are packaged, shrink-wrapped and palletized for protection during shipping.

## TECHNICAL SERVICES

Trained Propex Concrete Systems specialists are available worldwide to assist and advise in specifications and field service. Propex Concrete Systems representatives do not engage in the practice of engineering or supervision of projects and are available solely for service and support of our customers.

## SPECIFICATION CLAUSE

Fibercast 510 shall be used for shrinkage and temperature protection of the concrete. Fibercast 510 is a blend of high performance macro-monofilament fiber with patented sinusoidal deformations and micro-synthetic polypropylene fibers. Application rate shall be a minimum of 5 lbs per cubic yard (3.0 kg/m<sup>3</sup>) of concrete. Fiber manufacturer shall document evidence of satisfactory performance history and compliance with ASTM C III6/C III6M, Type III fiber reinforced concrete. Fibrous concrete reinforcement shall be manufactured by Propex Concrete Systems, 6025 Lee Highway, Suite 425, PO Box 22788, Chattanooga, TN 37422, USA, tel: 423 892 8080, fax: 423 892 0157, web site: [fibermesh.com](http://fibermesh.com).

**PROPEX®** | THE ADVANTAGE CREATORS.™  
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