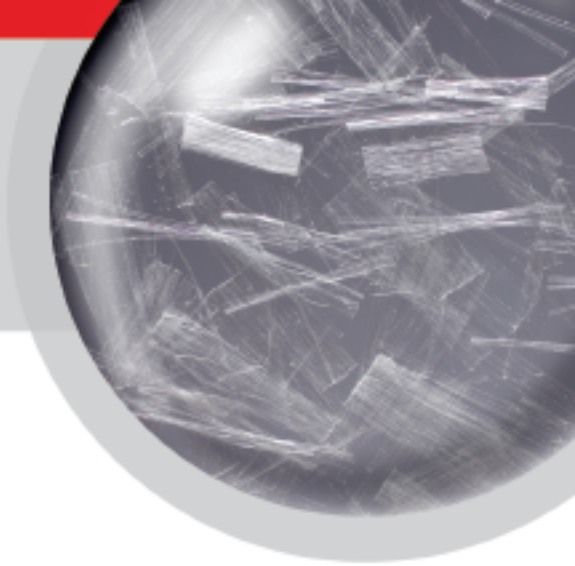
FIBERMESH® 300

PRODUCT DATA SHEET



FIBERMESH® 300 SYNTHETIC FIBER

Fibermesh 300, formerly InForce™ e3,® micro-reinforcement system for concrete—100 percent virgin homopolymer polypropylene fibrillated fibers with e3® patented technology containing no reprocessed olefin materials. Specifically engineered and manufactured in an ISO 9001:2000 certified facility to an optimum gradation for use as concrete secondary reinforcement at a minimum of 0.1% by volume (1.5 lbs/yd^3, 0.9 kg/m^3). UL Classified. Complies with National Building Codes and ASTM C 1116 Type III 4.1.3., ASTM C 1116 Performance Level I and Residual Strength.

ADVANTAGES

Accepted by National Codes as an alternate method of secondary reinforcing to traditional systems • Non-magnetic • Rustproof • Alkali proof • Requires no minimum amount of concrete cover • Is always positioned in compliance with codes • Safe and easy to use • Saves time and hassle

FEATURES & BENEFITS

- Alternate construction system to traditional secondary reinforcing in concrete
- Inhibits and controls the formation of intrinsic cracking in concrete
- Reinforces against impact forces
- Reinforces against the effect of shattering forces
- Reinforces against material loss from abrading forces
- Reinforces against water migration
- Provides improved durability
- Imparts toughness to hardened concrete
- Reduces plastic shrinkage and settlement cracking
- Provides residual strength

PRIMARY APPLICATIONS

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

- Slabs-on-ground
- Stucco
- Composite metal decks
- Sidewalks
- Curbs
- Slope paving
- Driveways
- Shotcrete
- Overlays & toppings

DO SPECIFY FIBERMESH 300 FIBERS:

- Reduced plastic shrinkage cracking
- Alternative to traditional reinforcement
- Improved impact, shatter and abrasion resistance
- Improved residual strength
- Reduced water migration and damage from freeze/thaw
- Improved durability
- Areas requiring non-metallic materials

DO NOT SPECIFY FIBERMESH 300 FIBERS:

- Crack control from external stresses
- Increasing joint spacing beyond ACI and PCA guidelines
- Decreasing thickness of slabs
- Replacing any moment or structural steel

CHEMICAL AND PHYSICAL PROPERTIES:

Absorption	Nil	Melt Point	324°F (162°C)
Specific Gravity	0.91	Ignition Point	1100°F (593°C)
Fiber Length*	Graded	Thermal Conductivity	Low
Electrical Conductivity	Low	Alkali Resistance	Alkali Proof
Acid & Salt Resistance	High		

*Also available in single cut lengths.

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CONCRETE SYSTEMS

FIBERMESH® 300

PRODUCT USE

MIXING DESIGNS AND PROCEDURES: Fibermesh® 300 micro-reinforcing is a mechanical, not chemical, process. The addition of Fibermesh 300 fibrillated fiber does not require any additional water or other mix design changes at normal rates. Fibermesh 300 fibrillated fiber is added to the mixer before, during or after batching the other concrete materials. Mixing time and speed are specified in ASTM C 94.

FINISHING: Fibermesh 300 micro-reinforced concrete can be finished by any finishing technique. Exposed aggregate, broomed and tined surfaces are no problem.

APPLICATION RATE: The standard application rate for Fibermesh 300 fibrillated fibers is 1.5 lbs/yd^3 (0.9 kg/m^3). For specialty performance see your local Fibermesh representative for recommendations regarding increased application rates.

GUIDELINES

Fibermesh 300 fibers should not be used to replace structural, load-bearing reinforcement. Fibermesh 300 fibers should not be used as a means of using thinner concrete sections than original design. Fibermesh 300 fibers should not be used to increase joint spacing past those dimensions suggested by PCA and ACI industry standard guidelines.

COMPATIBILITY

Fibermesh 300 fibers are compatible with all concrete admixtures and performance enhancing chemicals, but require no admixtures to work.

PACKAGING

Fibermesh 300 fibers are available in a variety of packaging options. The 1.5 lb bag (1 bag per cubic yard, 0.9 kg/m^3) is standard. Special packaging is available for full truckload addition. Bags are packed into cartons, 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.

REFERENCES

- ASTM C 94 Standard Specification for Ready-Mixed Concrete Uniformity Requirements.
- ASTM C 1399 Average Residual Strength of Fiber Reinforced Concrete.
- ASTM C 1436 Standard Specification for Materials for Shotcrete.
- ASTM C 1609/C 1609M Standard Test Method for Flexural Performance of Fiber-Reinforced Concrete (Using Beam With Third-Point Loading). Replaces ASTM C 1018.
- ASTM C 1116 Standard Specification for Fiber-Reinforced Concrete and Shotcrete.
- ACI 304 Guide for Measuring, Mixing, Transporting and Placing Concrete.
- ACI 506 Guide for Shotcrete.
- UL® Approvals for use as an alternate or in addition to welded wire fabric used in floor-ceiling D700, D800 and D900 series designs.
- International Code Council (ICC) ESR 1165 Report.

SPECIFICATION CLAUSE

Use only Fibermesh 300 - 100 percent virgin polypropylene fibrillated fibers with e3® patented technology containing no reprocessed olefin materials and specifically manufactured to an optimum gradation for use as concrete secondary reinforcement. Application per cubic yard shall equal a minimum of 0.1% by volume (1.5 lbs/yd^3, 0.9 kg/m^3). Fibermesh 300 fibers are for the control of cracking due to drying shrinkage and thermal expansion/contraction, lowered water migration, increased impact capacity, shatter resistance, abrasion resistance and residual strength. Fiber manufacturer must document evidence of 10 year satisfactory performance history, ISO 9001:2000 certification of manufacturing facility, compliance with applicable building codes and ASTM C 1116 Type III, 4.1.3, ASTM C 1116 (Ref: ASTM C 1018) Performance Level 1, 15 outlined in Section 21, Note 17 and an average minimum Residual Strength of 45 psi, of 4 beams from a single batch. 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.

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