



Fibermesh[®] InForce[™] e3[™] Product Bulletin

Description:

Fibermesh InForce e3 micro-reinforcement system for concrete – 100 percent virgin homopolymer polypropylene fibrillated fibers with e3 patented technology containing no reprocessed olefin materials and specifically engineered and manufactured in an ISO 9002 certified facility to an optimum gradation for use as concrete secondary reinforcement at a minimum of 0.1% by volume (1.5 pounds per cubic yard). 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.

Function:

- 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
- Imparts toughness to hardened concrete
- Reduces plastic shrinkage and settlement cracking
- Provides 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 – Save time and hassle.

Uses:

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

Examples:

Slab on Grade	Curbs	Tilt-Up Panels	Slope Paving
Sidewalks	Pre-cast	Mortar	Walls
Driveways	Water Tanks	Composite Decks	Thin Sections
Stucco	Overlays/Toppings	Maintenance Jobs	Shotcrete

Chemical and Physical Properties:

Absorption	Nil	Melt Point	324° F
Specific Gravity	0.91	Ignition Point	680° F
Fiber Length	Graded	Thermal Conductivity	Low
Electrical Conductivity	Low	Alkali Resistance	Alkali Proof
Acid & Salt Resistance	High		

Technical Services:

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



Application Rate:

The standard application rate for Fibermesh® InForce™ e3™ fibrillated fibers is 1.5 # per cubic yard (.9Kg per cubic meter). For specialty performance see your local Fibermesh representative for recommendations regarding increased application rates.

Mix Designs:

Fibermesh InForce e3 micro reinforcing is a mechanical, not chemical, process. The addition of InForce e3 fibrillated fiber does not require any additional water nor other mix design changes at normal rates.

Mixing Procedures:

Fibermesh InForce e3 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.

Finishability:

Fibermesh InForce e3 micro-reinforced concrete can be finished by any finishing technique. Exposed aggregate, broomed and tined surfaces are no problem.

Compatibility:

Fibermesh InForce e3 fibers are compatible with all concrete admixtures and performance enhancing chemicals, but requires no admixtures to work.

Guidelines:

Fibermesh InForce e3 fibers should not be used to replace structural, load bearing reinforcement. InForce fibers should not be used as a means of using thinner concrete sections than original design. InForce fibers should not be used to increase joint spacing past those dimensions suggested by PCA and ACI industry standard guidelines.

Packaging:

Fibermesh InForce e3 fibers are available in a variety of packaging options. The 1.5 pound bag (1 bag per cubic yard) is standard. Special packaging is available for full truckload addition. Bags are packed into cartons, shrink wrapped and palletized for protection during shipping. Both Fas-Pak® and convenience packages are available.

Mini-Specification:

Use only 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% (1.5 pounds) by volume (.9Kg per cubic meter). Fibermesh® InForce™ e3™ 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 9002 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, I5 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 SI® Concrete Systems, 4019 Industry Drive, Chattanooga, Tennessee, USA, 37416. Phone: (423) 892-8080 • Fax: (423) 892-0157 • e-mail: fibermesh@sind.com • web site <http://www.fibermesh.com>

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