

NOVOMESH® 950

PRODUCT DATA SHEET



NOVOMESH® 950 MACRO-SYNTHETIC FIBER BLEND

The new and improved Novomesh 950 secondary reinforcement system for concrete is a blend of polypropylene/polyethylene high performance macro-monofilament fibers with geometrically designed, patented sinusoidal deformations and 100% virgin polypropylene micro-synthetic fibers containing no reprocessed olefin materials. With a wider cross-section resulting in an increased surface area of the macro fiber, the new blend delivers improved adhesion in the concrete mix, increased bond strength and an overall increase in performance for toughness and crack holding capability. Novomesh 950 is engineered and manufactured for use as concrete reinforcement at a minimum addition rate of 5 lb/yd³ (3.0 kg/m³) and 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/micro-synthetic fiber blend for secondary reinforcement in lieu of welded wire reinforcement and light rebar
- Wider cross-section provides increased surface area for superior tight crack width control
- 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
- Control of drying shrinkage and temperature cracking
- Good finishing characteristics
- Pumpable reinforcement

PRIMARY APPLICATIONS

Applicable to all types of concrete in the commercial market segment that require a synthetic system for secondary reinforcement and where steel reinforcement cannot be used. The commercial market segment can include stores, hotels, institutional, educational, health care, amusement, offices, churches and storage facilities.

- Slabs-on-ground
- Parking areas
- Exterior pavements
- Sidewalks/Driveways
- Overlays & toppings
- Non-magnetic applications
- Runways

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	1.8 in (45 mm)
Electrical Conductivity	Low
Melt Point	328°F (164°C)

DO SPECIFY NOVOMESH 950 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

DO NOT SPECIFY NOVOMESH 950 FIBERS:

- Increasing joint spacing beyond ACI and PCA guidelines
- Decreasing the thickness of slabs
- Replacing structural levels of steel reinforcement

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PRODUCT USE

MIXING DESIGNS AND PROCEDURES: Novomesh® 950 reinforcing is a mechanical, not a chemical process. The addition of Novomesh 950 does not require additional water or other mix design changes at normal rates. Novomesh 950 degradable bags are added to the mixer after batching the other concrete materials or during the addition of aggregates and water. Mixing time of at least 5 minutes at mixing speed is required as specified in ASTM C 94.

FINISHING: Novomesh 950 reinforced concrete can be finished with normal finishing techniques in accordance with ACI 304, Section C.3.

APPLICATION RATE: The standard application rate for Novomesh 950 is one 5 lb degradable bag per cubic yard (3.0 kg/m³) of concrete.

GUIDELINES

Novomesh 950 should not be used to replace structural, load-bearing reinforcement. Novomesh 950 fibers should not be used as a means of using thinner concrete sections than original design. Novomesh 950 should not be used to increase joint spacing past those dimensions suggested by PCA and ACI industry standard guidelines.

COMPATIBILITY

Novomesh 950 is compatible with all commonly used concrete admixtures and performance enhancing chemicals.

PACKAGING

Novomesh 950 fibers are available in 5 lb degradable bags. The macro-monofilament fiber is collated in small bundles within the degradable bag for rapid distribution. Novomesh 950 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.

REFERENCE DOCUMENTS

- ASTM C 94/C 94M Standard Specification for Ready-Mixed Concrete.
- ASTM C 1116/C 1116M Standard Specification for Fiber-Reinforced Concrete.
- ASTM C 1399 Standard Test Method for Obtaining Average Residual-Strength of Fiber-Reinforced Concrete.
- ASTM C 1436 Standard Specification for Materials for Shotcrete.
- ASTM C 1550 Standard Test Method for Flexural Toughness of Fiber Reinforced Concrete (Using Centrally Loaded Round Panel).
- 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.
- JCI-SF4 Method of Test for Flexural Strength and Flexural Toughness of Fiber Reinforced Concrete.
- ACI 304 Guide for Measuring, Mixing, Transporting and Placing Concrete.
- ACI 506 Guide for Shotcrete.

SPECIFICATION CLAUSE

Novomesh 950 shall be used for shrinkage and temperature protection of the concrete. Novomesh 950 is a blend of high performance macro-monofilaments with patented sinusoidal deformations and micro-synthetic polypropylene fibers. Application rate shall be a minimum of 5 lbs per cubic yard (3.0 kg/m³) of concrete. Fiber manufacturer shall document evidence of satisfactory performance history and compliance with ASTM C 1116/C 1116M, 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.

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