NOVOMESH® 700

PRODUCT DATA SHEET

NOVOMESH® 700 STEEL AND SYNTHETIC FIBER BLEND

Novomesh 700, formerly VertiForce®, fiber reinforcement system for poured-in-place concrete walls and ICF (Insulating Concrete Forms) construction—a patented blend of steel fiber and 100 percent virgin homopolymer polypropylene graded fibrillated fiber 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 two 20 lb/yd^3 (11.90 kg/m^3) degradable bags. UL Classified. Complies with National Building Codes, ASTM C 1116/C 1116M, Type I and Type III fiber reinforced concrete and ASTM A 820.

ADVANTAGES

Is always positioned in compliance with codes • Safe and easier to use than traditional reinforcement • Speeds up construction time with less rebar to place • Provides a more cohesive mix for ease of pumping and placing • Reduces the potential for honeycombing, voids and bridging • Saves time and hassle

FEATURES & BENEFITS

- Steel/synthetic fiber reinforcement system for poured-in-place walls and ICF construction
- Meets International Code Council (ICC) AC 15 testing requirements as tested by an independent laboratory
  (Novomesh 700 reinforced walls demonstrated increased moment capacity to ACI-318 design methods of 4 in and 6 in walls reinforced with #4 rebar)
- Inhibits formation of plastic shrinkage and plastic settlement cracks
- Provides impact, abrasion and shatter resistance
- Lowered water migration
- Provides fatigue resistance
- Provides residual strength
- Provides improved durability
- Pumpable reinforcement
- Withstands hurricane-force winds up to 130 mph

PRIMARY APPLICATIONS

For use as concrete reinforcement in poured-in-place walls and ICF construction. Reduces the amount of rebar used in building walls.

DO SPECIFY NOVOMESH 700 FIBERS:

- Alternative to traditional steel reinforcement for poured-in-place walls and ICF construction.
- Improved impact and shatter resistance
- To withstand hurricane-force winds up to 130 mph
- Increased residual strength
- Improved durability

USE REBAR IN THE FOLLOWING LOCATIONS:

- In lintels over windows and doors
- Around openings in walls (doors and windows)
- At the top of a wall that will have another wall added
- The connection between a wall and its foundation
- For areas requiring seismic reinforcement

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)

Steel Component:

Tensile Strength	140-180 Kpsi (966-1242 MPa)
Fiber Length	1.5 in (38 mm)
Aspect Ratio	34
Deformation	Continuously deformed circular segment

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CONCRETE SYSTEMS

NOVOMESH® 700

PRODUCT USE

MIXING DESIGNS AND PROCEDURES: Novomesh® 700 reinforcing is a mechanical, not a chemical process. The addition of Novomesh 700 does not require additional water or other mix design changes at normal rates. Novomesh 700 degradable bags are added to the mixer after batching the other concrete materials. Mixing time of at least 5 minutes at mixing speed is required as specified in ASTM C 94. It is recommended that gloves and eye protection be used when handling or adding the package to concrete.

APPLICATION RATE: The standard application rate for Novomesh 700 is two 20 lb degradable bags per cubic yard (11.90 kg/m^3) of concrete.

GUIDELINES

Novomesh 700 fibers should not be used to replace structural, load-bearing reinforcement. Novomesh 700 fibers should not be used as a means of using thinner concrete sections than original design. Novomesh 700 is acceptable to use assuming your wall is a simply supported wall, has a minimum wall thickness of 4 in and a maximum height of 8 ft or has a minimum wall thickness of 6 in and maximum height of 10 ft, and a concrete compressive strength of no less than 3,000 psi.

COMPATIBILITY

Novomesh 700 is compatible with all commonly used concrete admixtures and performance enhancing chemicals.

PACKAGING

Novomesh 700 fibers are available in 20 lb degradable bags. Novomesh 700 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 A 820 Standard Specification for Steel Fibers for Fiber-Reinforced Concrete.
- 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 1609/C 1609M Standard Test Method for Flexural Performance of Fiber-Reinforced Concrete (Using Beam With Third-Point Loading). Replaces ASTM C 1018.
- ACI 304 Guide for Measuring, Mixing, Transporting and Placing Concrete.
- ACI 544-3R Guide for Specifying, Proportioning, Mixing, Placing and Finishing Steel Fiber Reinforced Concrete.

SPECIFICATION CLAUSE

Novomesh 700 fibers shall be used for concrete reinforcement in poured-in-place ICF walls with a minimum wall thickness of 4 in and maximum height of 8 ft or a minimum wall thickness of 6 in and maximum height of 10 ft. Novomesh 700 is a blend of ASTM A 820 steel fibers and graded fibrillated polypropylene fibers of various lengths and thicknesses. Application rate shall be a minimum of two degradable 20 lb/yd^3 (11.90 kg/m^3) bags of concrete. Fiber manufacturer shall document evidence of satisfactory performance history and compliance with ASTM C 1116/C 1116M, Type I and Type III fiber reinforced concrete and ASTM A 820. 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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