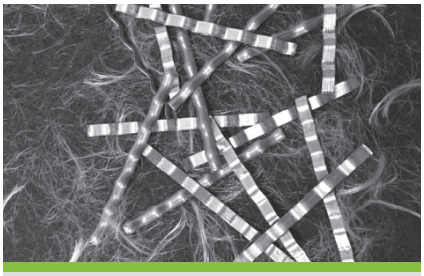
PRODUCT DATA • SIKA® NOVOMESH® 850



ADVANTAGES OF SIKA NOVOMESH 850 STEEL FIBERS:

- Requires no minimum amount of concrete cover
- Always positioned in compliance with codes
- Safe and easier to use than traditional reinforcement
- Reduces construction time

SIKA NOVOMESH 850 FIBERS

Sika Novomesh 850 an engineered blend of steel and micro fibers are designed specifically for the reinforcement of concrete. Novomesh 850 is a cold drawn undulated steel fiber and 100 percent virgin homopolymer polypropylene graded multifilament fiber. The blend of steel and micro fiber provide optimum combination of plastic shrinkage and long term reinforcement within the concrete.

FEATURES & BENEFITS

- Provides uniform multi-directional concrete reinforcement
- Increases crack resistance, ductility, energy absorption or toughness of concrete
- Improves impact resistance, fatigue endurance and shear strength of concrete
- Steel fiber bridging joints and cracks to provide tighter aggregate interlock resulting in increased load-carrying capacity
- Provides increased ultimate load-bearing capacity which allows possible reduction of concrete section
- Requires less labor to incorporate into concrete than conventional reinforcement
- Reduced plastic shrinkage cracking

PRIMARY APPLICATIONS

- Commercial and light industrial slabs on ground
- Composite metal decks
- Overlays
- Equipment foundations
- Pavements

COMPLIANCE

- Conforms to ASTM A820 /A 820M - 04,Type V cold drawn wire
- Conform to ASTM C 1116/C 1116M, Type I fiber reinforced concrete
- UL Classified: For use as an alternate or in addition to the welded wire fabric used in Floor-Ceiling D700, D800, D900 Series Designs. Fibers may also be used in Floor-Ceiling Design Nos. G229, G243, G256, G514

CHEMICAL AND PHYSICAL PROPERTIES

Micro Polypropylene Component			
Absorption	Nil	Ignition Point	759.2°F (404°C)
Acid & Salt Resistance	High	Melt Point	320°F (160°C)
Alkali Resistance	Alkali Proof	Specific Gravity	0.91
Electrical Conductivity	Low	Thermal Conductivity	Low
Fiber Length	Graded		

Steel Fiber Component			
Fiber Length	38mm (1.5 in)	Tensile Strength	966 MPa (140 ksi)
Equivalent Diameter	1.14mm (0.045 in)	Anchorage	Continuously deformed circular segment
Aspect Ratio	34	Material	Low Carbon Steel Wire

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PRODUCT USE

MIXING: Novomesh 850 blended fibers can be added during or after the batching of the concrete. Such devices as conveyor belts and dispensers may be used to add fibers to the mixer at the ready mix plant. After the addition of the fibers, the concrete should be mixed for a sufficient time (batch plant: minimum 5 minutes or 70 revolutions) at full mixing speed to ensure uniform distribution of the fibers throughout the concrete mix.

PLACING: Novomesh 850 blended fibers can be pumped or placed using conventional equipment.

FINISHING: Novomesh 850 reinforced concrete can be finished by normal finishing techniques.

APPLICATION RATE: The standard application rate for Novomesh 850 fibers is a minimum 24 lbs/yd^3, (14 kg/m^3). Sika Fiber technical staff can offer advice on dosage requirements once performance requirements have been established by the project designer/engineer.

COMPATIBILITY

Novomesh 850 fibers are compatible with all concrete admixtures and performance enhancing chemicals.

SAFETY

It is recommended that gloves and eye protection be used when handling or adding Novomesh 850 blended fibers to concrete. Full Safety Data Sheets are available on request.

PACKAGING

Novomesh 850 fibers are available in 10.9 kg (24 lb) degradable bags. Bags are palletized and shrink-wrapped for protection during shipping. Store materials in a cool dry place. Do not store in direct sunlight. The pallets should be protected against rain and snow. Do NOT stack pallets on top of each other.

TECHNICAL SERVICES

Trained Sika Fiber specialists are available worldwide to assist and advise in specifications and field service. Sika Fiber 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

- ACI 304 Guide for Measuring, Mixing, Transporting and Placing Concrete
- ACI 506 Guide for Shotcrete
- ACI 544-3R Guide for Specifying, Proportioning, Mixing, Placing and Finishing Steel Fiber Reinforced Concrete.
- ASTM 820 Standard Specification for Steel Fibers for Fiber-Reinforced Concrete.
- ASTM C 94/C 94M Standard Specification for Ready-Mixed Concrete.
- ASTM C1116/C1116M Standard Specification for Fiber-Reinforced Concrete and Shotcrete
- 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)
- Concrete Society (UK) Technical Report 34 Concrete Industrial Floors
- Concrete Society (UK) Technical Report 22 Non-Structural cracks in concrete
- European Standard EN 14889-2: 2006 Fibres for Concrete

SPECIFICATION CLAUSE

Fibers for concrete shall be Sika Novomesh 850, an engineered blend of steel fibers conforming to ASTM A 820 Type I and a micro-synthetic polypropylene fiber conforming to ASTM C1116 Type III. The fibers are manufactured specifically for the reinforcement of concrete.

or

Fibers for concrete shall be Sika Novomesh 850, an engineered blend of steel fibers conforming to EN 14889-1: 2006 and a micro synthetic polypropylene fiber conforming to EN 14889-2: 2006 Class Ia. The fibers are manufactured specifically for the reinforcement of concrete.

Unless otherwise stated, Sika Novomesh 850 steel fibers shall be mixed at the batch plant, at the recommended rate of ... lbs/yd^3 (.... kgs/m^3), and mixed for sufficient time (minimum 5 minutes) to ensure uniform distribution of the fibers throughout the concrete mix. Fibrous concrete reinforcement shall be manufactured by Sika Fibers, LLC, 4019 Industry Drive, Chattanooga, TN. 37416 USA, tel: 833.236.1255, web site: www.Fibermesh.com.

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