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
• Equipment foundations
• Composite metal decks
• Pavements
• Overlays

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

<table>
<thead>
<tr>
<th>Micro Polypropylene Component</th>
<th>Steel Fiber Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absorption</td>
<td>Fiber Length</td>
</tr>
<tr>
<td>Nil</td>
<td>38mm (1.5 in)</td>
</tr>
<tr>
<td>Acid &amp; Salt Resistance</td>
<td>Tensile Strength</td>
</tr>
<tr>
<td>High</td>
<td>966 MPa (140 ksi)</td>
</tr>
<tr>
<td>Alkali Resistance</td>
<td>Equivalent Diameter</td>
</tr>
<tr>
<td>Alkali Proof</td>
<td>1.14mm (0.045 in)</td>
</tr>
<tr>
<td>Alkali Proof</td>
<td>Anchorage</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Continuously deformed circular segment</td>
</tr>
<tr>
<td>Electrical Conductivity</td>
<td>Aspect Ratio</td>
</tr>
<tr>
<td>Low</td>
<td>34</td>
</tr>
<tr>
<td>Fiber Length</td>
<td>Material</td>
</tr>
<tr>
<td>Graded</td>
<td>Low Carbon Steel Wire</td>
</tr>
<tr>
<td>Ignition Point</td>
<td>Thermal Conductivity</td>
</tr>
<tr>
<td>759.2°F (404 °C)</td>
<td>Low</td>
</tr>
<tr>
<td>Melt Point</td>
<td></td>
</tr>
<tr>
<td>320°F (160 °C)</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td></td>
</tr>
<tr>
<td>0.91</td>
<td></td>
</tr>
<tr>
<td>Thermal Conductivity</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td></td>
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</tbody>
</table>

WE ARE THE CONCRETE FIBER EXPERTS™
WWW.FIBERMESH.COM
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/yd³, (14 kg/m³). 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
- ASTM C1116/C1116M Standard Specification for Fiber-Reinforced Concrete and Shotcrete
- 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/yd³ (.... kgs/m³), 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.