

## PRODUCT DATA SHEET

# SikaFiber® Novomesh®-850

Blended Fiber - Steel Fiber Type V and Micro Synthetic

### PRODUCT DESCRIPTION

SikaFiber® Novomesh®-850 an engineered blend of steel and micro fibers are designed specifically for the reinforcement of concrete. SikaFiber® Novomesh®-850 is a cold drawn continuously deformed steel fiber and 100 percent virgin homopolymer polypropylene graded multifilament micro synthetic fiber. The blend of steel and micro fiber provide optimum combination of plastic shrinkage and long term reinforcement within the concrete. SikaFiber® Novomesh®-850 previously Novomesh 850 or SikaFiber Force 850.

### USES

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

### CHARACTERISTICS / ADVANTAGES

- 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
- Requires less labor to incorporate into concrete than conventional reinforcement
- Micro synthetic fiber reduces plastic shrinkage cracking

### APPROVALS / STANDARDS

- Steel fiber conforms to ASTM A820 /A 820M - 04, Type V cold drawn wire
- Synthetic micro fiber conforms to ASTM D7508
- Conform to ASTM C 1116/C 1116M, Type I & Type III 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

### PRODUCT INFORMATION

#### Packaging

SikaFiber® Novomesh®-850 fibers are available in 10.9 kg (24 lb) degradable bags.

#### Appearance / Color

Micro synthetic:

- **Fiber Type:** Monofilament Micro Synthetic Fiber
- **Fiber Network:** 22,000,000 fibers/lb

Steel fiber:

- **Fiber Type:** Continuously Deformed Steel Fiber Type V

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- **Fiber Network:** 1,500 fibers/lb

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**Shelf Life**

If stored in dry conditions shelf life is 5 years.

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<b>Storage Conditions</b>	SikaFiber® Novomesh®-850 should be stored in a dry warehouse. Protect product from the rain.
<b>Dimensions</b>	<p>Steel Fiber:</p> <ul style="list-style-type: none"> <li>▪ <b>Length:</b> 1.5 inches (38 mm)</li> <li>▪ <b>Equivalent Diameter:</b> 0.045 inches (1.14 mm)</li> <li>▪ <b>Aspect Ratio:</b> 30</li> </ul> <p>Synthetic Micro Fiber:</p> <ul style="list-style-type: none"> <li>▪ <b>Length:</b> Graded 0.5 &amp; 0.75 inches (12.7 &amp; 19 mm).</li> <li>▪ <b>Diameter:</b> Graded 0.0012 &amp; 0.002 inches (0.03 &amp; 0.05 mm).</li> <li>▪ <b>Aspect Ratio:</b> Varies from 250 to 630</li> </ul>

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## TECHNICAL INFORMATION

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<b>Tensile Strength</b>	Steel fiber: >140 ksi (964 MPa)
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## APPLICATION INFORMATION

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<b>Recommended Dosage</b>	The dosage of the SikaFiber® Novomesh®-850 will vary according to the type of application and the performance requirements of the project. Standard recommended dosage rate of SikaFiber® Novomesh®-850 is between 24 - 48 lbs/cu. yd. (14–28.5 kg/m <sup>3</sup> ) of concrete. Dosages outside the recommended dosage range can be used to meet project specific requirements. If this is the case please contact your Sika representative for technical support.
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<b>Mixing</b>	SikaFiber® Novomesh®-850 in degradable bag can be added directly to the concrete mixing system after the batching of the other ingredients and mixed for 4 to 5 minutes or 70 revolutions. Only a water reducing or high range water reducing admixture should be used to adjust concrete to the desired workability.
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### Application

The addition of SikaFiber® Novomesh®-850 at the normal recommended dosage rate does not require any mix design or application changes. The fiber concrete can be mixed, sprayed or placed using conventional equipment.

### Tooling & Finishing

SikaFiber® Novomesh®-850 can be used in power/hand troweled concrete, colored and broom finished concrete. Fiber reinforced concrete can be finished by most finishing techniques as indicated in ACI-302. Proper timing and workmanship are important when using a steel fiber to insure the fiber is not elevated at the surface.

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## BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

## ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using

any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

## OTHER RESTRICTIONS

See Legal Disclaimer.

## LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at [usa.sika.com](http://usa.sika.com) or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs.

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