

## PRODUCT DATA SHEET

# Sika® Fibermesh®-650

### Macro-Synthetic Fiber

#### PRODUCT DESCRIPTION

Sika® Fibermesh®-650 is macro synthetic reinforcing fiber complying with ASTM C 1116, Type III. Sika® Fibermesh®-650 is 100% virgin copolymer fiber designed to provide a uniform three dimensional reinforcement system in the concrete mix. Specifically engineered and manufactured in an ISO 9001 certified manufacturing facility. Sika® Fibermesh®-650 previously Fibermesh 650 or SikaFiber Force 650.

#### USES

Sika® Fibermesh®-650 can be successfully used as a safe and simple alternative to wire mesh and rebar. Due to its mechanical properties Sika® Fibermesh®-650 is recommended for use in following applications:

- Industrial and warehouse slab on grade
- Residential and commercial slab on grade
- Toppings and overlays
- Replacement for wire mesh or rebar
- Composite metal decks
- Precast reinforcement - septic tanks and burial vaults
- Exterior pavements and parking areas

#### PRODUCT INFORMATION

##### Packaging

Sika® Fibermesh®-650 are pucked and placed various sizes of "toss-in" degradable bags. The bags are packed into cartons and palletized.

#### CHARACTERISTICS / ADVANTAGES

- Reduces plastic shrinkage/settlement cracking and drying shrinkage cracking in concrete.
- Provides multi-dimensional secondary reinforcement, alternate to welded wire fabric, light rebar and steel fibers.
- Improves residual strength of concrete.
- Improves impact, shatter, ductility and abrasion resistance of concrete.
- Enhances durability and toughness of concrete.
- Pumpable reinforcement
- Safer and easier to use than wire mesh and rebar
- Reduction in construction time, since it does not need to be place, cut and chaired.
- Does not corrode and is highly alkali resistant.
- Does not absorb water or chemically affect the curing process.
- Reducing embodied carbon through the replacement of convention steel reinforcement with synthetic structural fibers.

#### APPROVALS / STANDARDS

- Sika® Fibermesh®-650 is UL/ULc certified and approved for usage in all D700, D800 and D900 series decks as an alternate to welded wire fabric.
- Sika® Fibermesh®-650 complies with European Standard EN 14889-2 Fibres for Concrete Part 2: Class II and carries the CE marking.
- Comple with ASTM C1116/C1116M, Type III fiber reinforced concrete and ASTM D7508.

<b>Appearance / Color</b>	<ul style="list-style-type: none"> <li>▪ <b>Fiber Type:</b> monofilament macro synthetic fiber</li> <li>▪ <b>Fiber Network:</b> 90,000 fibers/lb</li> </ul>
<b>Shelf Life</b>	If stored in dry conditions shelf life is 5 years.
<b>Storage Conditions</b>	Sika® Fibermesh®-650 should be stored in a cool dry warehouse. Protect product from the rain and direct sunlight.
<b>Density</b>	0.91
<b>Dimensions</b>	<b>Length:</b> Graded 1.5" & 1.75" (38 & 44mm). Also available in single cut length. <b>Diameter:</b> Graded 0.0165 & 0.0177" (0.42 & 0.45mm). <b>Aspect Ratio:</b> Varies from 76 to 105
<b>Melting Point</b>	324 °F (162 °C)

## TECHNICAL INFORMATION

<b>Resistance to Alkalinity</b>	Excellent
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## APPLICATION INFORMATION

<b>Recommended Dosage</b>	The dosage of the Sika® Fibermesh®-650 will vary according to the type of application and the performance requirements of the project. Standard recommended dosage rate of Sika® Fibermesh®-650 is between 3–7.5 lbs/cu. yd. (1.8–4.45 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.
<b>Mixing</b>	Sika® Fibermesh®-650 in a dispersible bag can be added directly to the concrete mixing system after the batching of the ingredients and mixed for 4 to 5 minutes or 70 revolutions. The addition of Sika® Fibermesh®-650 at the recommended dosage rates may decrease the slump; however, additional water should not be added. Only a water reducing or high range water reducing admixture should be used to adjust concrete to the desired workability. <b>Application</b> The addition of Sika® Fibermesh®-650 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. <b>Tooling &amp; Finishing</b> Sika® Fibermesh®-650 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 macro synthetic fiber to insure fiber is not elevated at the surface.

## 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. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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### Product Data Sheet

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