

## PRODUCT DATA SHEET

# Sika® Fibermesh-650 S

### Macro-Synthetic Fibers

#### PRODUCT DESCRIPTION

Sika® Fibermesh-650 S is a graded macro-synthetic fiber complying with ASTM C1116, Type III. Sika® Fibermesh-650 S is 100% virgin copolymer fiber designed to provide a uniform three dimensional reinforcement system in the concrete or sprayed mix. Specifically engineered and manufactured in an ISO 9001 certified facility. Sika® Fibermesh-650 S was formerly called Fibermesh 650S and SikaFiber Force 650S.

#### USES

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

- Sprayed Concrete
- Precast
- Slope stabilisation
- Rock and ground support
- Concrete linings

#### CHARACTERISTICS / ADVANTAGES

- Uniquely graded fiber design to minimize voids in the concrete matrix.
- Increased energy absorption for sprayed concrete
- Cost-effective, three-dimensional reinforcement alternative to secondary wire mesh or rebar, and steel fibers.
- Can be utilized to reduce rebar or wire mesh.
- Increased safety on job site; remove lifting of reinforcement, bending to tie, and tripping hazard.
- Reduction in construction time. No cutting, placing, tying, and charring required.

- Reducing embodied carbon through the replacement of convention steel reinforcement with synthetic structural fibers.
- Increase ductility, flexural toughness and post first crack reinforcement of concrete.
- Increased durability due to high chemical resistance and corrosion free.
- Inhibits plastic shrinkage and settlement cracking.
- Greater energy absorption at higher displacements.
- Improves impact, shatter, and abrasion resistance of concrete.
- Reduces permeability.
- Pumpable reinforcement with reduced wear on pumps and hoses.
- Toss in degradable bags make it easy to batch.

#### ENVIRONMENTAL INFORMATION

Lowers carbon footprint through the removal of rebar or wire mesh reinforcing which has a higher GWP.

A Type III Product-Specific Environmental Product Declaration (EPD) and a Manufacturer Inventory are available for Sika® Fibermesh-650 S. For further information, please visit:

<https://usa.sika.com/en/sustainability.html>

#### APPROVALS / STANDARDS

- Complies with European Standard EN 14889-2:2006 Fibres for Concrete Parts 2 and carries CE marking
- ISO 9001 Quality Assured
- Complies with ASTM C1116 / C1116M Type III and ASTM D7508 / D7508M

## PRODUCT INFORMATION

<b>Fiber Volume Content</b>	54,000 fibers/lb
<b>Packaging</b>	Sika® Fibermesh-650 S are pucked and placed in 1 kg "toss-in" degradable bags which are placed into cartons, or the pucks are placed directly into cartons. The cartons are then palletized for shipping.
<b>Shelf Life</b>	5 years from date of production if stored properly in undamaged, unopened, original sealed packaging.
<b>Storage Conditions</b>	Store materials in a cool dry place. Do not store in direct sunlight.
<b>Fiber Type</b>	monofilament macro synthetic fiber
<b>Dimensions</b>	<b>Length:</b> Graded 1.9" & 2.4" (48 & 57mm). Also available in single cut length 2.4" (60mm) <b>Diameter:</b> Graded 0.0181 & 0.0189" (0.46 & 0.48mm).
<b>Melting Point</b>	162°C (324°F)
<b>Ignition Temperature</b>	593°C (1100°F)

## TECHNICAL INFORMATION

<b>Tensile Strength</b>	89 ksi (613 MPa)
<b>Resistance to Alkalinity</b>	Alkali Proof

## APPLICATION INFORMATION

<b>Recommended Dosage</b>	The application rate for Sika® Fibermesh-650 S macro-synthetic fibers will vary depending on the application, mix design and toughness requirements of each particular project. Typically dosage will fall in the range of 5 to 15 pounds per cubic yard (3.0 to 8.0 kg per cubic metre). For specific performance and dosage recommendations, contact your local Sika representative.
<b>Compatibility</b>	Sika® Fibermesh-650 S fibers are compatible with all concrete admixtures and performance enhancing chemicals.

## 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.

## OTHER RESTRICTIONS

See Legal Disclaimer.

## 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.

## 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.**

Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at <https://usa.sika.com/en/group/SikaCorp/termsandconditions.html> or by calling 1-800-933-7452.

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### Product Data Sheet

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