PRODUCT DATA SHEET
Sika® Fibermesh-650 S

MACRO-SYNTHETIC FIBRES FOR CONCRETE

PRODUCT DESCRIPTION
Sika® Fibermesh-650 S is an engineered graded macro-synthetic fiber featuring e3 patented technology, manufactured to an optimum gradation and oriented to allow greater surface area contact within the concrete, resulting in increased interfacial bonding and flexural toughness. Sika® Fibermesh-650 S is specifically engineered and manufactured in an ISO9001 certified facility for use as concrete reinforcement.

USES
- Sprayed Concrete
- Sea Defence
- Precast
- Slope stabilisation

CHARACTERISTICS / ADVANTAGES
- Graded macro-synthetic fiber for sprayed concrete reinforcement
- Greater surface area provides increased flexural toughness (residual strength) equivalent to steel.
- Increases concrete durability - Corrosion free, rust proof, alkali proof
- Inhibits plastic shrinkage and rebound
- Controls drying shrinkage and temperature cracking
- Pumpable reinforcement with reduced wear on pumps and hoses
- Safe and easy to handle
- Simplified logistics
- Economical alternative system to steel mesh and/or steel fibres
- Non-magnetic
- Requires no minimum amount of concrete cover
- Always positioned in compliance with codes
- Safer and easier to use than traditional reinforcement
- Saves time and easy use

APPROVALS / STANDARDS
- Complies with European Standard EN 14889-2:2006 Fibres for Concrete Parts 2 and carries CE marking
- Complies with ASTM C 1116/C 1116M, Type III fiber reinforced concrete

PRODUCT INFORMATION

Packaging
Sika® Fibermesh-650 S fibres are pucked and placed in 2.2 lb (1.0 kg) "toss in" degradable paper bags, which are designed to be placed directly into the concrete mixer without opening. Sika® Fibermesh-650 S macro-synthetic fibers are also available in collated form or "pucks" packaged in 10 kg cartons. Other packaging options are available.
### Appearance / Color
- **Fiber Type:** monofilament macro synthetic fiber
- **Fiber Network:** 54,000 fibers/lb (119,000 fibers/kg)

### Shelf Life
If stored in dry conditions shelf life is 5 years.

### Storage Conditions
Sika® Fibermesh-650 S should be stored in a cool dry warehouse. Protect product from the rain and direct sunlight.

### Density
0.91

### Dimensions
- **Length:** Graded 1.9 & 2.4 in (48 & 57 mm).
- **Equivalent Diameter:** Graded 0.018 & 0.019" (0.46 & 0.48mm). Also available in single equivalent diameter.
- **Aspect Ratio:** Varies from 100 to 124

### Melting Point
162°C (324°F)

## TECHNICAL INFORMATION

### Resistance to Alkalinity
Alkali Proof

### APPLICATION INFORMATION

#### Recommended Dosage
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 14 pcy (3.0 to 8.0 kg per cubic meter). 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.

#### Mixing
Sika® Fibermesh-650 S 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 S 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.

**Application**
The addition of Sika® Fibermesh-650 S 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.

## 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 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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