

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.

WHERE TO USE

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

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 / CERTIFICATES

- 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.
- Complies with ASTM C1116/C1116M, Type III fiber reinforced concrete and ASTM D7508.

PRODUCT INFORMATION

CSC MasterFormat®	03 05 00
Packaging	Sika® Fibermesh®-650 are pucked and placed in 1.8 kg "toss-in" degradable bags. The bags are packed 8 to a cartons and palletized 27 carton per pallet.
Appearance / Colour	<ul style="list-style-type: none">▪ Fiber Type: monofilament macro synthetic fiber▪ Fiber Network: 198,000 fibers/kg
Shelf Life	If stored in dry conditions shelf life is 5 years.
Storage Conditions	Sika® Fibermesh®-650 should be stored in a cool dry warehouse. Protect product from the rain and direct sunlight.
Density	0.91
Dimensions	Length: Graded 38 & 44mm. Also available in single cut length. Diameter: Graded 0.42 & 0.45mm. Aspect Ratio: Varies from 76 to 105
Melting Point	162 °C

TECHNICAL INFORMATION

Resistance to Alkalinity	Excellent
--------------------------	-----------

APPLICATION INFORMATION

Recommended Dosage	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 1.8–4.45 kg/m ³ 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.
Mixing	<p>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.</p> <p>Application 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.</p> <p>Tooling & Finishing 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.</p>

BASIS OF PRODUCT DATA

Product properties are typically averages, obtained under laboratory conditions. Reasonable variations can be expected on-site due to local factors, including environment, preparation, application, curing and test methods.

ENVIRONMENT, HEALTH & SAFETY

User must read the most recent corresponding Safety Data Sheets (SDS) before using any products. The SDS provides information and advice on the safe handling, storage and disposal of chemical products and contains physical, ecological, toxicological and other safety-related data.

LOCAL RESTRICTIONS

Note that as a result of specific local regulations the declared data and recommended uses for this product may vary from country to country. Consult the local Product Data Sheet for exact product data and uses.

LEGAL NOTES

The information, and in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any recommendations, or from any other advice offered. The information contained herein does not relieve the user of the products from testing them for the intended application and purpose. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request or may be downloaded from our website at: www.sika.ca

Sika Canada Inc.

Head Office
601, avenue Delmar
Pointe-Claire, Quebec
H9R 4A9
1-800-933-SIKA
www.sika.ca

Other locations

Boisbriand (Quebec)
Brantford; Cambridge;
Sudbury; Toronto (Ontario)
Edmonton (Alberta)
Surrey (British Columbia)

Product Data Sheet

Sika® Fibermesh®-650
September 2023, Version 03.01
02140802100000118

SikaFibermesh-650-en-CA-(09-2023)-3-1.pdf

