BUILDING TRUST

PRODUCT DATA SHEET

SikaFiber® Novomesh® CAL-51

Blended Fiber - Macro Synthetic and Micro Synthetic

PRODUCT DESCRIPTION

SikaFiber® Novomesh® CAL-51 is an engineered blend of macro and micro synthetic reinforcing fibers specifically designed for the reinforcement of concrete. SikaFiber® Novomesh® CAL-51 is 100% virgin copolymer polypropylene macro and micro fibers deisgned to provide the optimum combination of plastic shrinkage and long term reinforcement within the concrete. Specifically engineered and manufactured in an ISO 9001 certified manufacturing facility. SikaFiber® Novomesh® CAL-51 previously Novomesh CAL-51.

USES

SikaFiber® Novomesh® CAL-51 can be successfully used as a safe and simple alternative to wire mesh and rebar. Due to its mechanical properties SikaFiber® Novomesh® CAL-51 is recommended for use in following applications:

- Bridge Decks
- Non-magnetic applications
- Self consolidating concrete
- Overlays & toppings
- Exterior pavements

CHARACTERISTICS / ADVANTAGES

- Macro-synthetic/micro-synthetic fiber blend for secondary reinforcement
- Inhibits formation of plastic shrinkage and plastic settlement cracks
- Control of drying shrinkage and temperature cracking
- Provides impact, abrasion and shatter resistance
- Provides higher levels of residual strength
- Provides improved durability
- Reduces permeability
- Good finishing characteristics
- Pumpable reinforcement
- Reducing embodied carbon through the replacement of convention steel reinforcement with synthetic structural fibers.

APPROVALS / STANDARDS

- Complies with European Standard EN 14889-2 Fibers for Concrete Part 2: Class II and 1a.
- Complies with ASTM C 1116/C 1116M,Type III fiber reinforced concrete and ASTMD7508/D7508M.

PRODUCT INFORMATION

Packaging	SikaFiber® Novomesh® CAL-51 fibers with a 3 to 1 macro to micro blend are available in 4 lb (1.81 kg) degradable bags. SikaFiber® Novomesh® CAL-51 fibers with a 4 to 1 macro to micro blend are availabble in 5.0 lb (2.27 kg) degradable bags.The macro monofilament fiber is collated in water soluble wrapped bundles (pucks) within the degradable bag for rapid distribution.
Shelf Life	If stored in dry conditions shelf life is 5 years.

Storage Conditions	SikaFiber® Novomesh® CAL-51 should be stored in a cool dry warehouse. Protect product from the rain and direct sunlight
Density	0.91
Dimensions	Micro Fiber: ▪ **Length:** Graded 0.5 & 0.75 inches (12.7 & 19 mm). ▪ **Diameter:** Graded 0.0012 & 0.002 inches (0.03 & 0.05 mm). ▪ **Aspect Ratio:** Varies from 250 to 630 Macro Fiber ▪ **Length:**1.85” (47 mm). ▪ **Average Equivalent Diameter:** 0.03" (0.81 mm). ▪ **Aspect Ratio:** 58
Melting Point	324 °F (162 °C)

TECHNICAL INFORMATION

Resistance to Alkalinity	Excellent

APPLICATION INFORMATION

Recommended Dosage	The dosage of the SikaFiber® Novomesh® CAL-51 will vary according to the type of application and the performance requirements of the project. Standard recommended dosage rate of SikaFiber® Novomesh® CAL-51 with the 3 to 1 macro to micro blend is 4 lbs/cu. yd. (2.4 kg/m³) of concrete. Standard recommended dosage rate of SikaFiber® Novomesh® CAL-51 with the 4 to 1 macro to micro blend is 5 lbs/cu. yd. (3 kg/m³) 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	SikaFiber® Novomesh® CAL-51 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 SikaFiber® Novomesh® CAL-51 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 SikaFiber® Novomesh® CAL-51 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® CAL-51 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 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.

Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Phone: +1-800-933-7452
Fax: +1-201-933-6225
usa.sika.com

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537