

PRODUCT DATA SHEET

SikaFiber® Novocon® HE-4550

STEEL FIBER - TYPE I

PRODUCT DESCRIPTION

SikaFiber® Novocon® HE-4550 steel fibers are designed specifically for the reinforcement of concrete. SikaFiber® Novocon® HE-4550 is a cold drawn hooked end (HE) steel fiber, to provide optimum anchorage within the concrete. SikaFiber® Novocon® HE-4550 steel fibers are specifically designed to meet or exceed the defined performance requirements. Previously SikaFiber Force 1050 and Novocon HE1050.

USES

- Industrial slabs-on-ground
- Airport pavements
- Blast resistant concrete
- Equipment foundations

CHARACTERISTICS / ADVANTAGES

- Provides uniform multi-directional concrete reinforcement
- Increases crack resistance, ductility, energy absorption or toughness of concrete
- Improves impact resistance, fatigue endurance and shear strength of concrete
- High tensile strength fiber bridging joints and cracks to provide tighter aggregate interlock resulting in increased load-carrying capacity
- Provides increased ultimate load-bearing capacity which allows possible reduction of concrete section
- Requires less labor to incorporate into concrete than conventional reinforcement
- Offers economical concrete reinforcement solutions with greater project scheduling accuracy
- Ideally suited for hand or vibratory screeds, laser screeds and all conventional finishing equipment

APPROVALS / STANDARDS

- Conforms to ASTM A820 /A 820M - 04, Type I cold drawn wire
- Conforms to ASTM C 1116/C 1116M, Type I fiber reinforced concrete

PRODUCT INFORMATION

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|---------------------------|---|
| Packaging | SikaFiber® Novocon® HE-4550 fibers are available in 20 kg (44 lb) paper bags. There are 50 units or 1,000 kg (2,204 lb) bags on a pallet. |
| Appearance / Color | <ul style="list-style-type: none"> ▪ Fiber Type: Hooked End Steel Fiber Type 1 ▪ Fiber Network: 1,300 fibers/lb (2,900 fibers/kg) |
| Shelf Life | If stored in dry conditions shelf life is 5 years. |
| Storage Conditions | The pallets should be protected against rain and snow. Do NOT stack pallets on top of each other. |
| Density | 7.85 |

Dimensions

Length: 2 inches (50 mm)
Diameter: 0.041 inches (1.03 mm)
Aspect Ratio: 50

TECHNICAL INFORMATION

Tensile Strength 159.5 ksi (1,100 MPa)

APPLICATION INFORMATION

Recommended Dosage The dosage of the SikaFiber® Novocon® HE-4550 will vary according to the type of application and the performance requirements of the project. Standard recommended dosage rate of SikaFiber® Novocon® HE-4550 is between 25 - 67 lbs/cu. yd. (15–40 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® Novocon® HE-4550 can be ribbon feed 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® Novocon® HE-4550 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® Novocon® HE-4550 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® Novocon® HE-4550 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 steel fiber to insure the 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.

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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Product Data Sheet

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