



PRODUCT DATA SHEET

Edition 09.2020/v1
CSC Master Format™ 03 05 00

SikaFiber® Novocon® HE-4550

STEEL FIBRES (FORMERLY SIKAFIBER® FORCE-1050)

Description	SikaFiber® Novocon® HE-4550 steel fibres are designed specifically for the reinforcement of concrete, mortars and other cementitious mixes. SikaFiber® Novocon® HE-4550 is a cold-drawn loose wire fibre, deformed with hooked ends to provide optimum performance within the concrete mix.														
Where to Use	SikaFiber® Novocon® HE-4550 steel fibres can be used in a variety of concrete applications, such as: <ul style="list-style-type: none"> ▪ Industrial slabs ▪ Pavements ▪ Foundations ▪ Blast-resistant structures and other structural concrete 														
Advantages	<ul style="list-style-type: none"> ▪ Increase crack-resistance, ductility, energy absorption and toughness of concrete ▪ Improve impact-resistance, fatigue endurance and shear strength of concrete ▪ Help control plastic shrinkage-cracking in concrete ▪ Help reduce or eliminate need for conventional reinforcement ▪ Provide three-dimensional reinforcement ▪ Easy to use and work with 														
Standards	<ul style="list-style-type: none"> ▪ Conforms to ASTM A820 / A820 M Type I cold drawn wire ▪ Conforms to ASTM C1116 / C1116 M, Type I fiber reinforced concrete 														
<p>Technical Data</p> <table border="0"> <tr> <td>Packaging</td> <td>20 kg/box 50 boxes/pallet</td> </tr> <tr> <td>Appearance</td> <td>Fiber Type: Hooked End Steel Fiber Type 1</td> </tr> <tr> <td>Fibre Length</td> <td>50 mm</td> </tr> <tr> <td>Fibre Diameter</td> <td>1 mm</td> </tr> <tr> <td>Aspect Ratio</td> <td>50</td> </tr> <tr> <td>Tensile Strength</td> <td>1100 MPa</td> </tr> <tr> <td>Shelf Life and Storage</td> <td>5 years if stored in original and unopened packaging and in dry conditions. The pallets should be protected against rain and snow. Do NOT stack pallets on top of each other.</td> </tr> </table> <p><small>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.</small></p>		Packaging	20 kg/box 50 boxes/pallet	Appearance	Fiber Type: Hooked End Steel Fiber Type 1	Fibre Length	50 mm	Fibre Diameter	1 mm	Aspect Ratio	50	Tensile Strength	1100 MPa	Shelf Life and Storage	5 years if stored in original and unopened packaging and in dry conditions. The pallets should be protected against rain and snow. Do NOT stack pallets on top of each other.
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HOW TO USE															
Dosage	The dosage of the SikaFiber® Novocon® HE-4550 will vary according to the type of application and the performance requirements of the project. The standard application rate for SikaFiber® Novocon® HE-4550 fibres is between 15 and 40 kg/m ³ . 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 fibre-reinforced concrete can be mixed, sprayed or placed using conventional equipment.														
Finishing	SikaFiber® Novocon® HE-4550 can be used in power/hand troweled concrete, colored and broom finished concrete. Fibre-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 fibre is not elevated at the surface.														
Clean Up	Use personal protective equipment (chemical resistant goggles/gloves/clothing). Ventilate area. In absence of adequate ventilation, use properly-fitted NIOSH respirator. Without direct contact, remove spilled or excess product and place in suitable sealed container. Dispose of excess product and container in accordance with applicable environmental regulations.														

**Health and Safety
Information**

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent SAFETY DATA SHEET containing physical, ecological, toxicological and other safety-related data.

KEEP OUT OF REACH OF CHILDREN
FOR INDUSTRIAL USE ONLY

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, within their shelflife. 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

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Certified ISO 9001 (CERT-0102780)
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