BUILDING TRUST

PRODUCT DATA SHEET

SikaFiber® Novocon® HE-1050 HT

HIGH TENSILE STEEL FIBRES FOR CONCRETE

PRODUCT DESCRIPTION

SikaFiber® Novocon® HE-1050 HT steel fibres are designed specifically for the reinforcement of concrete, mortars and other cementitious mixes. SikaFiber® Novocon® HE-1050 HT is a cold drawn wire fibre, deformed with hooked ends to provide optimum performance within the concrete mix. SikaFiber® Novocon® HE-1050 HT steel fibres are European Standard - EN 14889-1:2006 compliant and have been specifically designed to meet or exceed the defined performance requirements.

USES

- Ground supported slabs
- Precast
- Suspended floors
- Overlays
- Jointless floors
- Walls
- External roads & pavements
- Blast-resistant concrete
- Composite metal deck

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 fibre 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 labour 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
- Requires no minimum amount of concrete cover
- Always positioned in compliance with codes
- Safe and easier to use than traditional reinforcement
- Reduces construction time

APPROVALS / STANDARDS

- Complies with European Standard EN 14889-1:2006 Fibres for Concrete Part 1: Group I and carries CE marking
- Conforms to ASTM A820/A820M-04, Type I cold drawn wire

Reference Documents

- European Standard EN 14889 -1:2006 Fibres for Concrete
- ASTM 820 Standard Specification for Steel Fibers for Fiber-Reinforced Concrete
- ASTM C1116/C1116M Standard Specification for Fiber-Reinforced Concrete
- ASTM C1399 Standard Test Method for Obtaining Average Residual-Strength of Fiber Reinforced Concrete
- ASTM C1550 Standard Test Method for Flexural Toughness of Fiber Reinforced Concrete (Using centrally loaded round panel)
- ASTM C1609/C1609M Standard Test Method for Flexural Performance of Fiber-Reinforced Concrete (Replaces ASTM C1018)
- JCI-SF4 Method of Test for Flexural Strength and Flexural Toughness of Fiber Reinforced Concrete
- Concrete Society (UK) Technical Report 34 Concrete Industrial Floors
- Concrete Society (UK) Technical Report 66 External In-situ Concrete Paving

PRODUCT INFORMATION

Chemical Base	Bright and clean wire (hooked end)
Packaging	SikaFiber® Novocon® HE-1050 HT fibres are available, as standard, in 25 kg packaging.
Shelf Life	24 months from date of production
Storage Conditions	The pallets should be protected against rain and snow. Do NOT stack pallets on top of each other.

Dimensions

Fibre Length	Diameter	Aspect Ratio
50mm	1.0mm	50

TECHNICAL INFORMATION

Specific Advice	It is recommended that gloves and eye protection be used when handling or adding SikaFiber® Novocon® HE-1050 HT steel fibres to concrete.
Tensile Strength	1450 N/mm²

APPLICATION INFORMATION

Recommended Dosage	The fibre dosage will vary depending on the type of application, concrete mix design and the performance/toughness requirements of each particular project. Typically, steel fibre dosage will be in the range of 20 kg to 40 kg per cubic metre. Sika technical staff can offer advice on dosage requirements once performance requirements have been established by the project designer/engineer.
Compatibility	SikaFiber® Novocon® HE-1050 HT steel fibres are compatible with all curing compounds, superplasticisers, water reducers, hardeners and coatings.

APPLICATION INSTRUCTIONS

Mixing
SikaFiber® Novocon® HE-1050 HT steel fibres can be added during or after the batching of the concrete but should never be added as the first component. Such devices as conveyor belts, chutes and dispensers may be used to add fibres to the mixer at the ready mix plant. After the fibres have been added, the concrete should be mixed for sufficient time (minimum 5 minutes at full mixing speed) to ensure uniform distribution of the fibres throughout the concrete. The use of mid or high-range water reducing admixtures can be advantageous, but is not essential.

Placing
SikaFiber® Novocon® HE-1050 HT steel fibres can be pumped and placed using conventional equipment. Hand or vibratory screeds and laser screeds can be used with SikaFiber® Novocon® HE-1050 HT steel fibres.

Finishing
Conventional finishing techniques and equipment can be used when finishing SikaFiber® Novocon® HE-1050 HT steel fibre concrete. In some cases an extra bull float process is advised and lowering the angle of the power float blades will help to minimise fibre exposure on the surface.

VALUE BASE

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

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 written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. 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.

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