

PRODUCT DATA SHEET

Novocon® FE-1050

Steel fibres for concrete

DESCRIPTION

Novocon® FE-1050 steel fibres are designed specifically for the reinforcement of concrete, mortars and other cementitious mixes. Novocon® FE-1050 is a cold drawn wire fibre, deformed with flat ends (FE) to provide optimum performance within the concrete mix. Novocon® FE-1050 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

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
- 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
- Improved durability

APPROVALS / CERTIFICATES

- Complies with European Standard EN 14889-1:2006 Fibres for Concrete Part 1:Group I and carries CE marking
- Conforms to ASTM A820 /A 820M - 04, Type 1 cold drawn segment wire

Reference Documents

- European Standard EN 14889-1: 2006 Fibres for Concrete
- EN 14651 Test method for metallic fibre concrete
- ASTM 820 Standard Specification for Steel Fibres for Fibre-Reinforced Concrete
- ASTM C1116/C1116M Standard Specification for Fibre-Reinforced Concrete and Shotcrete
- ASTM C1399 Standard Test Method for Obtaining Average Residual-Strength of Fiber Reinforced Concrete
- ASTM C 1550 Standard Test Method for Flexural Toughness of Fibre Reinforced Concrete (Using Centrally Loaded Round Panel)
- ASTM C 1609 /C 1609M Standard Test Method for Flexural Performance of Fibre-Reinforced Concrete (Using Beam With Third-Point Loading)

PRODUCT INFORMATION

Packaging	Novocon® FE-1050 fibres are available as standard in 10 kg box and 1000 kg bag .		
Appearance and colour	Bright and clean wire (flat ends)		
Shelf life	NA		
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 Novocon® FE-1050 steel fibres to concrete.
Tensile strength	1,150 N/mm ²

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 60 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	Novocon® FE-1050 steel fibres are compatible with all curing compounds, superplasticisers, water reducers, hardeners and coatings.

BASIS OF PRODUCT DATA

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.

ECOLOGY, HEALTH AND SAFETY

This product is an article as defined in article 3 of regulation (EC) No 1907/2006 (REACH). It contains no substances which are intended to be released from the article under normal or reasonably foreseeable conditions of use. A safety data sheet following article 31 of the same regulation is not needed to bring the product to the market, to transport or to use it. For safe use follow the instructions given in the product data sheet. Based on our current knowledge, this product does not contain SVHC (substances of very high concern) as listed in Annex XIV of the REACH regulation or on the candidate list published by the European Chemicals Agency in concentrations above 0,1 % (w/w).

APPLICATION INSTRUCTIONS

Mixing

Novocon® FE-1050 steel fibres can be added during 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 mix. The use of mid or high-range water reducing admixtures can be advantageous, but is not essential.

Placing

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

Finishing

Conventional finishing techniques can be used when finishing Novocon® FE-1050 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.

LOCAL RESTRICTIONS

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

Sika Australia Pty Limited

ABN 12 001 342 329

aus.sika.com

Tel: 1300 22 33 48

Product Data Sheet

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