PRODUCT DATA • SIKA® NOVOCON® HE1050

ADVANTAGES OF SIKA NOVOCON HE1050 STEEL FIBERS:

- 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
- Removal of dowels at induced joints with improved aggregate interlock is allowed

SIKA NOVOCON HE1050 STEEL FIBERS

Sika Novocon HE1050 steel fibers are designed specifically for the reinforcement of concrete. Novocon HE1050 is a cold drawn hooked end (HE) steel fiber, to provide optimum anchorage within the concrete. Novocon HE1050 steel fibers are specifically designed to meet or exceed the defined performance requirements.

FEATURES & BENEFITS

- 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

PRIMARY APPLICATIONS

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

COMPLIANCE

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

CHEMICAL AND PHYSICAL PROPERTIES

Fiber Length	*50mm (2 in)*	Tensile Strength	*1,100 MPa (159.5 ksi)*
Diameter	*1.0mm (0.039 in)*	Anchorage	*Hooked Ends*
Aspect Ratio	*50*	Material	*Bright Carbon Steel Wire*

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PRODUCT USE

MIXING: Novocon HE1050 steel fibers can be added during or after the batching of the concrete. Such devices as conveyor belts and dispensers may be used to add fibers to the mixer at the ready mix plant. After the addition of the fibers, the concrete should be mixed for a sufficient time (batch plant: minimum 5 minutes or 70 revolutions) at full mixing speed to ensure uniform distribution of the fibers throughout the concrete mix.

PLACING: Novocon HE1050 steel fibers can be pumped or placed using conventional equipment.

FINISHING: Novocon HE1050 reinforced concrete can be finished by normal finishing techniques.

APPLICATION RATE: The standard application rate for Novocon HE1050 fibers is a minimum 25 lbs/yd^3, (15 kg/m^3). Sika Fiber technical staff can offer advice on dosage requirements once performance requirements have been established by the project designer/engineer.

COMPATIBILITY

Novocon HE1050 fibers are compatible with all concrete admixtures and performance enhancing chemicals.

SAFETY

It is recommended that gloves and eye protection be used when handling or adding Novocon HE1050 steel fibers to concrete. Full Safety Data Sheets are available on request.

PACKAGING

Novocon HE1050 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. The pallets should be protected against rain and snow. Do NOT stack pallets on top of each other.

TECHNICAL SERVICES

Trained Sika Fiber specialists are available worldwide to assist and advise in specifications and field service. Sika Fiber representatives do not engage in the practice of engineering or supervision of projects and are available solely for service and support of our customers.

REFERENCE DOCUMENTS

- ACI 304 Guide for Measuring, Mixing, Transporting and Placing Concrete
- ACI 544-3R Guide for Specifying, Proportioning, Mixing, Placing and Finishing Steel Fiber Reinforced Concrete.
- ASTM 820 Standard Specification for Steel Fibers for Fiber-Reinforced Concrete.
- ASTM C 94/C 94M Standard Specification for Ready-Mixed Concrete.
- ASTM C1116/C1116M Standard Specification for Fiber-Reinforced Concrete and Shotcrete
- ASTM C 1436 Standard Specification for Materials for Shotcrete
- ASTM C 1550 Standard Test Method for Flexural Toughness of Fiber Reinforced Concrete (Using Centrally Loaded Round Panel)
- ASTM C 1609 /C 1609M Standard Test Method for Flexural Performance of Fiber-Reinforced Concrete (Using Beam With Third-Point Loading)
- Concrete Society (UK) Technical Report 34 Concrete Industrial Floors
- Concrete Society (UK) Technical Report 22 Non-Structural cracks in concrete
- European Standard EN 14889-2: 2006 Fibres for Concrete

SPECIFICATION CLAUSE

Fibers for concrete shall be Sika Novocon HE1050 steel fibers conforming to ASTM A 820 Type I and manufactured specifically for the reinforcement of concrete.

or

Fibers for concrete shall be Sika Novocon HE1050 steel fibers conforming to EN 14889-1: 2006 and manufactured specifically for the reinforcement of concrete.

Unless otherwise stated, Sika Novocon HE1050 steel fibers shall be mixed at the batch plant, at the recommended rate of ... lbs/yd^3 (.... kgs/m^3), and mixed for sufficient time (minimum 5 minutes) to ensure uniform distribution of the fibers throughout the concrete mix. Fibrous concrete reinforcement shall be manufactured by Sika Fibers, LLC, 4019 Industry Drive, Chattanooga, TN 37416 USA, tel: 833.236.1255, web site: www.Fibermesh.com.

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