NOVOCON® 1050 STEEL FIBERS

Novocon 1050 steel fibers are designed specifically for the reinforcement of concrete, mortars and other cementitious mixes. Novocon 1050 is a cold drawn wire fiber, deformed with hooked ends (HE) or flat ends (FE) to provide optimum anchorage within the concrete mix. Novocon 1050 steel fibers are ASTM compliant and 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

COMPLIANCE

- Conforms to ASTM A 820 /A 820M - 04, Type 1 cold drawn wire
- Testing shall conform to ASTM C III6/C III6M, ASTM C 1609/C 1609M and JCI-SF4

PRIMARY APPLICATIONS

- Industrial slabs-on-ground
- Blast-resistant structures
- Airport pavements
- Equipment foundations
- Highway pavements

CHEMICAL AND PHYSICAL PROPERTIES

- Fiber Length: 2 in (50 mm)
- Equivalent Diameter: 0.039 in (1.0 mm)
- Aspect Ratio: 50
- Tensile Strength: 152,000 psi (1050 MPa)
- Deformation: Flat end (FE), hooked end (HE)
- Appearance: Bright and clean wire
**PRODUCT USE**

**MIXING DESIGNS AND PROCEDURES:** Novocon® 1050 steel fibers 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 and dispensers may be used to add fibers to the mixer at the ready mix plant. After the fibers have been added, the concrete should be mixed for sufficient time (75 rotations at full mixing speed) to ensure uniform distribution of the fibers throughout the concrete. The use of mid- or high-range water reducing admixtures can be advantageous, but is not essential. Novocon 1050 steel fibers can be pumped, shot or placed using conventional equipment.

**FINISHING:** Hand or vibratory screeds and laser screeds can be used with Novocon 1050 steel fibers. Conventional finishing techniques and equipment can be used when finishing Novocon 1050 steel fiber concrete. In some cases an extra bull float process is advised and lowering the angle of the power float blades will help to minimize fiber exposure on the surface.

**APPLICATION RATE:** The fiber dosage will vary depending on the type of application, concrete mix design and the performance/toughness requirements of each particular project. Typically, steel fiber dosage will be in the range of 25 lbs to 75 lbs per cubic yard (15 kgs to 45 kgs per cubic meter). Propex Concrete Systems technical staff can offer advice on dosage requirements once performance requirements have been established by the project designer/engineer.

**SAFETY**

It is recommended that gloves and eye protection be used when handling or adding Novocon 1050 steel fibers to concrete.

**COMPATIBILITY**

Novocon 1050 steel fibers are compatible with all curing compounds, superplasticizers, water reducers, hardeners and coatings.

**PACKAGING & STORAGE**

Novocon 1050 HE and 1050 FE fibers are available in 55 lb boxes. The pallets should be protected against rain and snow. Do NOT stack pallets on top of each other.

**TECHNICAL SERVICES**

Propex is backed by our team of reinforced concrete specialists who can carefully analyze each project and provide fiber reinforced concrete design solutions to ensure maximum project performance and cost efficiency.

**REFERENCE DOCUMENTS**

- JCI-SF4 Method of Test for Flexural Strength and Flexural Toughness of Fiber Reinforced Concrete.
- ACI 304 Guide for Measuring, Mixing, Transporting and Placing Concrete.

UL® Classified: Type Novocon Steel Fibers for use as an alternate or in addition to the welded wire fabric used in Floor-Ceiling D700, D800, D900 Series Designs. Fibers may also be used in Design Nos. 625E, 651E. Fibers added to concrete mix at a rate of 10 to 50 lb of fiber for each cubic yard of concrete.

**SPECIFICATION CLAUSE**

Fibers for concrete shall be Novocon 1050 HE (hooked end) or FE (flat end) steel fibers conforming to ASTM A 820 Type I and manufactured from cold drawn wire with a minimum tensile strength of 152,000 psi. Unless otherwise stated, Novocon 1050 steel fibers should be added to the concrete at a rate of lbs/yd³ and mixed for sufficient time (75 rotations at a full mixing speed) to ensure uniform distribution of the fibers throughout the concrete. Fiber reinforced concrete shall be manufactured by Propex Concrete Systems, 6025 Lee Highway, Suite 425, PO Box 22788, Chattanooga, TN, 37422, USA, tel: 423 892 8080, fax: 423 892 0157, web site: fibermesh.com.

Fibermesh®, Novomesh®, Novocon®, ENDURO®, Fibercast® and e3® are registered trademarks of Propex Operating Company, LLC. THIS PUBLICATION SHOULD NOT BE CONSTRUED AS ENGINEERING ADVICE. WHILE INFORMATION CONTAINED IN THIS PUBLICATION IS ACCURATE TO THE BEST OF OUR KNOWLEDGE, PROPEX DOES NOT WARRANT ITS ACCURACY OR COMPLETENESS. THE ULTIMATE CUSTOMER AND USER OF THE PRODUCTS SHOULD ASSUME SOLE RESPONSIBILITY FOR THE FINAL DETERMINATION OF THE SUITABILITY OF THE INFORMATION AND THE PRODUCTS FOR THE CONTEMPLATED AND ACTUAL USE. THE ONLY WARRANTY MADE BY PROPEX FOR ITS PRODUCTS IS SET FORTH IN OUR PRODUCT DATA SHEETS FOR THE PRODUCT, OR SUCH OTHER WRITTEN WARRANTY AS MAY BE AGREED BY PROPEX AND INDIVIDUAL CUSTOMERS. PROPEX SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ARISING FROM PROVISION OF SAMPLES, A COURSE OF DEALING OR USAGE OF TRADE.

©2012 Propex Operating Company, LLC

05/12