



### **NOVOCON FE1050 STEEL FIBRES**

Novocon FE1050 steel fibres are designed specifically for the reinforcement of concrete, mortars and other cementitious mixes. Novocon FE1050 is a cold drawn wire fibre, deformed with flat ends (FE) to provide optimum performance within the concrete mix. Novocon FE1050 steel fibres are European Standard-EN 14889-1:2006 compliant and have been 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 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

### **PRIMARY APPLICATIONS**

- Ground supported slabs
- Suspended Floors
- Jointless Floors
- External roads & pavements
- Precast
- Overlays
- Walls
- Blast-resistant concrete

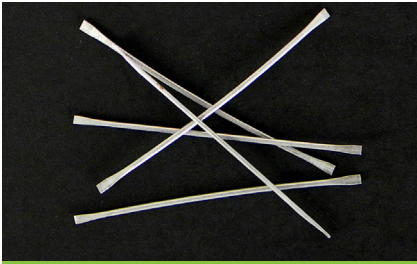
### **COMPLIANCE**

- 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

### **NOMINAL PHYSICAL PROPERTIES**

Fibre Length	50mm	Tensile Strength	1,150 N/mm <sup>2</sup>
Diameter	1.0mm	Anchorage	Flat Ends
Aspect Ratio	50	Material	Bright & clean wire

### **PRODUCT USE**



### **ADVANTAGES OF NOVOCON FE1050 STEEL FIBRES:**

- 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



**NOVOCON**<sup>®</sup>  
BY PROPEX

## PRODUCT DATA • NOVOCON<sup>®</sup> FE1050

**MIXING:** Novocon FE1050 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 mix. The use of mid or high-range water reducing admixtures can be advantageous, but is not essential.

**PLACING:** Novocon FE1050 steel fibres can be pumped and placed using conventional equipment. Hand or vibratory screeds and laser screeds can be used with Novocon FE1050 steel fibres.

**FINISHING:** Conventional finishing techniques can be used when finishing Novocon FE1050 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 minimize fibre exposure on the surface.

**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. Fibermesh technical staff can offer advice on dosage requirements once performance requirements have been established by the project designer/engineer.

### COMPATIBILITY

Novocon FE1050 steel fibres are compatible with all curing compounds, super plasticizers, water reducers, hardeners and coatings.

### SAFETY

It is recommended that gloves and eye protection be used when handling or adding Novocon FE1050 steel fibres to concrete. Full Safety Data Sheets are available on request.

### PACKAGING

Novocon FE1050 fibres are available as standard in 25 kg packaging. They are also available upon request in 1,000 kg bulk bags. The pallets should be protected against rain and snow. Do NOT stack pallets on top of each other.

### TECHNICAL SERVICES

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

### REFERENCE DOCUMENTS

- European Standard EN 14889-2: 2006 Fibres for Concrete
- ASTM 820 Standard Specification for Steel Fibres for Fibre-Reinforced Concrete
- ACI 304 Guide for Measuring, Mixing, Transporting and Placing 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)
- JCI-Sf4 Method of Test for Flexural Strength and Flexural Performance of Fiber-Reinforced Concrete (Replaces ASTM C1018)
- Concrete Society (UK) Technical Report 63 Guidance for the Design of Steel Fibre Reinforced Concrete
- Concrete Society (UK) Technical Report 34 Concrete Industrial Floors
- Concrete Society (UK) Technical Report 66 External In-situ Concrete Paving

### SPECIFICATION CLAUSE

Fibres for concrete shall be Novocon FE1050 flat end steel fibres conforming to EN 14889-1:2006 Group I and manufactured from cold drawn wire with a tensile strength of 1150 N/mm<sup>2</sup>.

Unless otherwise stated, Novocon FE1050 steel fibres shall be added to the concrete at the recommended application rate of ... .. kg per cubic metre and mixed for sufficient time (minimum 5 minutes at full mixing speed) to ensure uniform distribution of the fibres throughout the concrete.

Fibrous concrete reinforcement shall be manufactured by:

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