



Premix 50/10 Hooked End Steel Fiber



PREMIX 50/10 HOOKED END STEEL FIBERS

Premix 50/10 Hooked End Steel Fibers are designed specifically for the reinforcement of concrete, mortars and other cementitious mixes. Premix 50/10 is a cold drawn wire fiber, hooked end to provide optimum performance within the concrete mix. Premix 50/10 Hooked End 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 and 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.



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PRIMARY APPLICATIONS

- Ground supported slabs
- Jointless Floors & Jointed Floors
- External roads & pavements
- Manhole Covers
- Concrete crash barriers

COMPLIANCE

- Conforms to ASTM A 820, Type I cold drawn wire
- Testing conforms with ASTM A 820

TYPE

Loose Hooked End

NOMINAL DIMENSIONS

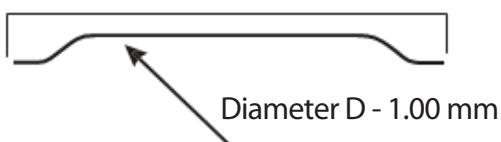
Diameter D : 1.00 mm
Length L : 50 mm
Aspect Ratio L / D : 50



GEOMETRY

Premix 50/10
Loose Hooked End Steel Fiber

Length - 50mm



D = 1.00mm
L = 50mm A/R= 50
Tolerance for D/L±10%
As per ASTM

MECHANICAL PROPERTIES

Tensile strength : 1200 mpa
Strain at failure : <4%
Number of Fibers per kg : 3500 Pcs

PRODUCT USE

MIXING DESIGNS AND PROCEDURES:

Premix 50/10 Hooked End 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, chutes and dispensers maybe 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 (minimum 5 minutes 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.

PLACING

Premix 50/10 Hooked End steel fibers can be pumped and placed using conventional equipment. Hand or vibratory screeds and laser screeds can be used with Premix 50/10 Hooked End steel fibers.

FINISHING:

Conventional finishing techniques and equipment can be used when finishing Premix 50/10 Hooked End steel fibers concrete. In some cases an extra bull float process is advised and lower in the angle of the power float blades will help to minimize fiber exposure on the surface.



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DOSAGE RATE:

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 fiber dosage will be in the range of 10 kg to 40 kg per cubic meter. Purushottam Steel Wool Pvt. Ltd. technical team can offer advice on dosage requirements once performance requirements have been established by the project designer/engineer.

COMPATIBILITY

Premix 50/10 Hooked End steel fibers 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 Premix 50/10 Hooked End steel fibers to concrete.

PACKAGING

Premix 50/10 Hooked End steel fibers are available, as standard in 25 kgs bag.

TECHNICAL SERVICES

Purushottam Steel Wool Pvt. Ltd. is backed by our team of reinforced concrete Engineers who can carefully analyze each project and provide fibre reinforced concrete design solutions to ensure maximum project performance and cost efficiency.

REFERENCES

- ASTMA820 Standard Specification for Steel Fibers for Fiber Reinforced Concrete.
- BS EN 14889-1
- ASTM C1116 Standard Specification for Fiber-Reinforced Concrete and Shotcrete.
- ASTM C1018 Standard Test Method for Flexural Toughness and First Crack Strength of Fiber-Reinforced Concrete.
- IRC:SP:46:1997 Code of Indian Road Congress
- IS:12592:2002 SFRC Manhole covers

SPECIFICATION CLAUSE

Fibers for concrete shall be Premix 50/10 Hooked End steel fibers conforming to ASTMA-820M Type I and manufactured from cold drawn wire with a minimum tensile strength of 1200 mPa/N/mm² and manufactured by Purushottam Steel Wool Pvt. Ltd.