



## HIND STEEL FIBER (HK)

### PRODUCT DATA SHEET

#### HOOK END STEEL FIBER

#### DESCRIPTION

**Hind Steel Fiber (HK)** is a superior quality cold drawn carbon steel wire fibers with hooked ends especially designed to offer most convenient and cost-effective product for concrete reinforcement. The fibers are manufactured from high tensile strength wire >1000 Mpa in accordance with **EN 14889-1 & ASTM A820 M04 Type 1 Standards**. Using **Hind Steel Fiber (HK)** prevents cracking of concrete and enhances the ductility and load bearing capacity of the concrete.

#### USES

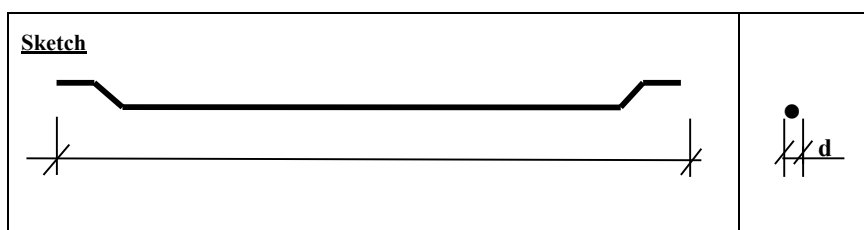
**Hind Steel Fiber (HK)** has its uses for Shotcrete in Mines/Tunnels, Precast Concrete Elements, Extruded Roadways Structures, Industrial Floorings, Pavements, Highways, Roadways and Bridges, Seismic Resistant Structures (Dams), Explosive and Impact resistant structures, Foundation Layers, Parking Areas & Airport Runways, Consolidation of walls, Marine/Coastal defence concrete, Pre-stressed Beams, Concrete Pipes, Concrete blocks and Railway Slippers.

#### ADVANTAGES

- Replacement of rebar mesh.
- The geometry of **Hind Steel Fiber (HK)** improves mechanical anchorage substantially. Its specially designed structure improves micro-cracking mechanism, Impact resistance, fatigue strength and flexural strength of concrete.
- It has greater flexibility with various types of Portland cements, admixture and shotcrete design mixes. Its loose and unglued characteristic provides even distribution in concrete mix in a fast and effective manner thus avoiding balling.
- Loose and unglued **Hind Steel Fiber (HK)** requires less labor and time to place concrete in comparison to glued steel fiber, wire mesh or bar reinforcement.
- Improves overall efficiency and reduces overall cost drastically.

#### APPLICATION

**Hind Steel Fiber (HK)** may be added before, during or after the batching of the concrete as per ASTM C 94 (4-5 minutes at mixing speed or approximately 60-70 revolutions). In batching plants fibers to be added by a shaker or through hopper to the aggregate on a conveyor belt during aggregate addition and mixed in normal condition. If fibers are added to transit mixer the drum should rotate at maximum speed and the steel fibers to be added slowly. This is important to avoid clump avoiding balling effect. Depending on fiber type dose rate the concrete slump to be increased by adding super-plasticizer, before fibers are added. Use of Micro silica is beneficial along with steel fibers. Steel fibers should not to be used as a first component in the concrete mix.



## DOSAGE

Depending on the structural requirements dosage may vary. For general guidelines the dosage recommended are **45-85 Kg/m<sup>3</sup> for Dry Mix Concrete**, **45-60 Kg/m<sup>3</sup> for Wet Mix Concrete** and **20-40 Kg/m<sup>3</sup> for Concrete Slab**.

## PROPERTIES

Material	Carbon Steel Wire
Fibre Type	Loose unglued with hooked end
Aspect Ratio	Ranging from 40 to 90
Length (mm)	25 - 60 $\pm$ 10%
Diameter (mm)	Ranging from 0.05 to 0.75 and also 1.0
Tensile Strength (Mpa)	1000 – 1400 $\pm$ 15%

## PACKING

Available in 20/25 Kg Non-Woven HDPE Bags. Palettes available on request.

## SHELF LIFE

Unlimited from the date of manufacturing in unopened conditions. To be stored in a cool and dry place away from direct sunlight at temperature ranging between 2<sup>0</sup> C (Min.) and 50<sup>0</sup> C (Max.)

## HANDLING PRECAUTION

**Hind Steel Fiber (HK)** has a risk of injury from protruding fibers. Use of gloves and eye protection goggles to be used while using steel fibers. Use no Hooks. No stacking is required.

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### Note:

- **Hindcon Chemicals** maintains a team of technically trained professionals to provide full support to your problems in construction, and recommend the correct product to suite your specific requirements. Our authorized applicators can attend your site for application of the products.
- The content of the Technical datasheet are for general information and guideline. The result shown here are generated from our laboratory or from our site experiences.
- Quality of our products are maintained as per ISO9001:2008 recommendations and continuous researches. The behavior can change as per the prevailing conditions at the time of applications.
- Since **HINDCON CHEMICALS LIMITED** has no control over the use to which the users may put the material, it does not claim or warrant that in the user's particular circumstances, the result that the user will obtain from the product will be the same as those described in this communication or that the user will find the information or recommendations complete, accurate or useful. The client must test and ascertain the safety and fitness for the product for use.
- The right to change the properties of the products is reserved with us. The proprietary rights of third parties must be observed. All orders are accepted subject to the terms of sale and delivery. Users must always refer to the most recent issue of the latest Data Sheet for the product concerned, copies of which will be supplied on request.

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(AN ISO 9001: 2015 COMPANY)

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