



Hooked End Steel Fiber (HE SF-45)

Product Description

Fiberego's HE SF-45 is a 45mm hooked-end steel fiber designed to enhance the strength, durability, and performance of concrete. Ideal for industrial and structural applications, this fiber provides uniform, multi-directional reinforcement, improving crack resistance, energy absorption, and overall concrete performance under various stress conditions.

Technical Specifications

Length	45mm
Diameter	0.5-2mm
Melting Point	1495°C
Tensile Strength	1.1GPa
Alkali&Acid Resistance	Good

Product Advantages

- **Uniform Multi-Directional Reinforcement:** Provides consistent reinforcement in all directions, significantly improving concrete's structural strength.
- **Increased Crack Resistance:** Enhances crack resistance, ductility, and energy absorption, making concrete more resilient under stress.
- **High Load-Bearing Capacity:** The high tensile strength fibers bridge joints and cracks, improving aggregate interlock and increasing load-carrying capacity.
- **Improved Impact Resistance:** Increases concrete's impact resistance, fatigue endurance, and shear strength, ideal for high-demand applications.
- **Reduced Labor Costs:** Requires less labor to incorporate into concrete compared to traditional reinforcement, reducing overall construction time and cost.
- **Versatility in Application:** Suitable for use in both pumped and sprayed concrete applications, ensuring uniform thickness and preventing voids behind traditional reinforcement.
- **Cost-Effective Solution:** Offers a more economical reinforcement solution with greater scheduling accuracy, reducing the need for additional materials and labor.

Applications

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| 1. Industrial slabs | 11.Sprayed Concrete |
| 2. Pavements | 12.Impact / Blast Resistant Concrete |
| 3. Extended joints slab on ground | 13.UHPC Applications |
| 4. Blast resistant structures and other structural concrete | 14.Commercial and light industrial slabs on ground |
| 5. Industrial slabs-on-ground | 15.Composite metal decks |
| 6. Airport pavements | |
| 7. Blast resistant concrete | |
| 8. Equipment foundations | |
| 9. Precast | |
| 10.Jointless floors | |

Packaging

Steel fibers are packed in woven bags with an outer layer of kraft paper for enhanced protection. It is recommended to use orderly arranged cartons for easy distribution and use at construction sites, which also helps to prevent tangling and clumping of fibers.

Mixing and Application Recommendations:

Before construction, dry mixing should be performed by evenly spreading steel fibers into the refractory materials, followed by wet mixing. This approach effectively prevents clumping during wet mixing and ensures even distribution of steel fibers within the refractory materials.

Storage and Transportation

► Storage Requirements:

Store in a dry, cool, and well-ventilated area to prevent corrosion.

► Transportation Precautions for Steel Fibers:

Handle with care during loading and unloading to avoid damage.

Ensure the transportation vehicle is dry and clean to prevent rust and contamination.

► After-Opening Care for Steel Fibers:

If not all fibers are used upon opening, reseal the package promptly to prevent moisture exposure, which can lead to rust.

Store partially used steel fibers for no longer than 12 months to maintain their quality and effectiveness.

FAQs

Q1: How does HE SF-45 improve concrete's crack resistance?

A1: HE SF-45 fibers bridge cracks and joints, ensuring better interlock between aggregates and providing superior crack resistance under dynamic loads.

Q2: Can HE SF-45 replace traditional rebar or wire mesh in concrete applications?

A2: Yes, HE SF-45 is designed to replace or reduce the need for traditional reinforcement methods, offering enhanced performance and cost savings.

Q3: What are the advantages of using HE SF-45 in sprayed concrete applications?

A3: HE SF-45 ensures uniform thickness in sprayed concrete, eliminates voids that can occur behind wire mesh, and enhances the overall strength and durability of the applied concrete.

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FibeRego is a global manufacturer of fibers, specializing in a variety of fibers for the concrete industry.



FOR ASSISTANCE WITH FIBERS:

☎ +86 158 5427 9587

✉ info@fiberego-mikem.com (China office)

✉ sales@fiberego-mikem.com(US R&D office)

📍 No. 988, Shunxing Road,Tianqiao District, Jinan, Shandong, China