



Polyacrylonitrile Fiber (PIF-06)

Product Description

Fiberego's PIF-06 is a 6mm long polyacrylonitrile fiber designed for use in the concrete industry. This high-performance synthetic fiber is engineered to enhance the mechanical properties of concrete, offering superior reinforcement, improved durability, and increased environmental resistance compared to traditional materials.

Technical Specifications

Composition	100% polyacrylonitrile
Shape	Bundled monofilament
Alkali&Acid Resistance	Super High
Heat resistance	It will not melt under the condition of 200°C.
Tensile Strength	≥600Mpa
Equivalent Diameter	15±2μm
Length	6mm
Elastic Modulus	≥5.0Gpa

Product Advantages

- **Enhanced Concrete Durability:** Improves the overall durability of concrete by reducing crack formation and propagation.
- **High Tensile Strength:** Offers excellent tensile strength, enhancing the concrete's structural integrity and resistance to external loads.
- **Corrosion Resistance:** Unlike traditional steel fibers, PAN fibers are resistant to corrosion, making them suitable for harsh environmental conditions.
- **Improved Fatigue Resistance:** Increases the fatigue life of concrete, making it ideal for structures subjected to cyclic loading.
- **Easy Integration:** Easily disperses within the concrete mix, ensuring uniform distribution without clumping.
- **Lightweight:** Adds minimal weight to the concrete mix, unlike traditional reinforcement options.
- **Chemical Stability:** Exhibits high stability in alkaline environments, ensuring long-term performance in concrete applications.
- **Cost-Effective:** Provides a cost-efficient alternative to some more expensive synthetic fibers with comparable performance benefits.

Applications

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| 1. Industrial flooring | 13. Fire-resistant applications |
| 2. Bridge decks | 14. Sustainable building projects |
| 3. Tunnel linings | 15. Reinforcement for thin concrete overlays |
| 4. Airport runways | |
| 5. Highway pavements | |
| 6. Marine structures | |
| 7. Water treatment facilities | |
| 8. Architectural concrete | |
| 9. Precast concrete elements | |
| 10. Seismic retrofitting | |
| 11. Blast-resistant structures | |
| 12. Decorative concrete | |

Packaging

- **Inner Packaging:** Each pack contains 0.2-4 kg, sealed in standard plastic bags for quality preservation.
- **Outer Packaging:** Packs are placed in woven bags or cardboard boxes, each weighing 10-20 kg, tailored to customer specifications.
- **Customized Options:** Available in water-soluble film, water-soluble paper, or regular paper bags for diverse needs.
- **Compression Packaging:** Reduces volume for efficient storage and transport, enhancing cost-effectiveness and sustainability.

Storage and Transportation

► Storage Requirements:

Store in a dry, cool, ventilated area.
Avoid direct sunlight to prevent degradation from UV exposure.
Keep away from humid environments to maintain fiber performance.
Avoid heavy pressure and high stacking to prevent packaging damage.

► Transportation Precautions:

Handle carefully during loading and unloading to prevent damage.
Ensure the transport vehicle is dry and clean to avoid moisture.
Protect from sharp objects and prevent heavy items from crushing the packaging.

FAQs

Q1: What makes PIF-06 different from other types of concrete reinforcement fibers?

A1: PIF-06 fibers are made from polyacrylonitrile, offering higher tensile strength and corrosion resistance compared to traditional materials like steel, enhancing concrete's longevity and durability.

Q2: Can PIF-06 be used in outdoor concrete applications?

A2: Yes, PIF-06 is highly resistant to environmental degradation and chemical attack, making it suitable for outdoor and marine applications where durability is critical.

Q3: How does PIF-06 contribute to sustainable building practices?

A3: PIF-06 enhances the performance and lifespan of concrete structures, reducing the need for repairs and maintenance, and its production involves lower emissions compared to steel, supporting more sustainable construction practices.

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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