



Bamboo Synthetic PP Macrofiber (BS SPM-54)

Product Description

FiberRego's Bamboo Synthetic PP Macrofiber BS SPM-54 is a 54mm long polypropylene fiber designed to mimic the mechanical properties of steel reinforcement in concrete structures. This innovative fiber solution enhances concrete's durability and toughness while offering significant environmental and safety benefits over traditional steel reinforcement methods.

Technical Specifications

Composition	100% Virgin Polypropylene
Diameter	0.2, 0.6, 0.8, 1.0mm
Length	54mm
Tensile Strength	≥400MPa
Elastic Modulus	≥4.0GPa
Elongation	20 - 25%
Alkali&Acid Resistance	High

Product Advantages

- **Superior Reinforcement:** Uniquely graded design minimizes voids in the concrete matrix, providing enhanced strength and stability.
- **Cost-Effective:** Offers a three-dimensional reinforcement that is more affordable and efficient compared to traditional steel fibers, rebar, or wire mesh.
- **Safety Enhancement:** Reduces the need for handling heavy steel on construction sites, significantly lowering the risk of injuries and tripping hazards.
- **Environmental Impact:** Helps in reducing the carbon footprint by substituting conventional steel with a sustainable synthetic fiber.
- **Increased Durability:** Highly resistant to chemicals and corrosion-free, ensuring long-lasting concrete applications.
- **Time-Saving:** Streamlines the construction process as it requires no cutting, tying, or fixing, facilitating quicker project completions.
- **Enhanced Concrete Properties:** Improves ductility, flexural toughness, and post-crack reinforcement, significantly enhancing the structural performance of concrete.

Applications

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|------------------------------|--|
| 1. Slab-on-ground | 13. Rock and ground support |
| 2. Pavements | 14. Permanent and temporary concrete linings |
| 3. Composite metal decks | 15. Slope stabilisation |
| 4. Mass concrete structures | |
| 5. Bridge decks | |
| 6. Sidewalks | |
| 7. Overlays | |
| 8. Precast concrete products | |
| 9. Industrial floors | |
| 10. Concrete linings | |
| 11. Slope stabilization | |
| 12. Sprayed concrete | |

FAQs

Q1: What are the main benefits of using BS SPM-54 over traditional steel reinforcement?

A1: BS SPM-54 offers increased safety, reduces construction time, and is environmentally friendlier than steel, with comparable strength and durability.

Q2: Can BS SPM-54 be used in any type of concrete application?

A2: Yes, BS SPM-54 is versatile and can be used across various applications including pavements, bridge decks, and precast concrete, adapting well to different construction requirements.

Q3: How does BS SPM-54 contribute to environmental sustainability?

A3: By replacing steel with polypropylene fibers, BS SPM-54 significantly lowers the carbon emissions associated with the production and disposal of steel, contributing to greener building practices.

Packaging

Inner Packaging:

- **Loose Plastic Bags:** Fibers are packaged loosely in standard plastic bags to preserve quality and prevent damage. Each pack contains 0.2-4 kg, depending on the customer's requirements.
- **Water-Soluble Film Wrapping:** For added convenience and environmental consideration, fibers can also be wrapped in water-soluble film, molded into cylindrical shapes to facilitate usage and disposal.

Outer Packaging:

- **Plastic Bag Packaging:** The plastic-bagged fibers are then placed either in cardboard boxes or woven bags, tailored to meet customer specifications and ensure safe transit.
- **Water-Soluble Film Packaging:** Fibers wrapped in water-soluble film are exclusively packed in cardboard boxes to maintain integrity and ease of handling.

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.

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



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