



Synthetic PP Macrofiber (TE SPM-48)

Product Description

Fiberego's TE SPM-54 is a 54 mm long transparent embossed synthetic polypropylene fiber, designed to reinforce concrete while providing an eco-friendly alternative to traditional steel reinforcements. This advanced fiber is engineered to integrate seamlessly with concrete, enhancing its durability and structural integrity without the environmental drawbacks associated with steel.

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

- **Enhanced Concrete Integrity:** Utilizes a uniquely graded fiber design to significantly minimize voids within the concrete matrix, resulting in a stronger and more durable composite.
- **Cost-Effective Solution:** Offers a viable three-dimensional reinforcement alternative to traditional materials like wire mesh or rebar, potentially reducing overall project costs.
- **Increased Safety:** Mitigates common job site hazards by eliminating the need for heavy lifting and metal tying, enhancing safety and reducing tripping risks.
- **Environmental Efficiency:** Contributes to sustainability by reducing the carbon footprint associated with steel production and use.
- **Durability and Resistance:** Exhibits high chemical resistance and is corrosion-free, which prolongs the lifespan of concrete structures and reduces maintenance costs.
- **Construction Efficiency:** Simplifies the construction process by removing the steps of cutting, placing, and tying steel, thereby speeding up completion times.
- **Improved Concrete Performance:** Enhances concrete's ductility, flexural toughness, and ability to absorb energy, especially effective in post-crack scenarios.

Applications

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

FAQs

Q1: How does TE SPM-54 compare to traditional steel reinforcement in terms of performance?

A1: TE SPM-54 matches or exceeds the performance of steel in terms of strength and flexibility, while also offering superior corrosion resistance and environmental benefits.

Q2: Can TE SPM-54 be used in environmentally sensitive areas?

A2: Yes, its corrosion-free nature and reduced environmental impact make it suitable for use in sensitive environments, contributing to sustainable construction practices.

Q3: What are the main benefits of using TE SPM-54 in construction projects?

A3: TE SPM-54 reduces construction time and labor costs, improves safety on job sites, and enhances the long-term durability and environmental footprint of concrete infrastructures.

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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