

Synthetic PP Macrofiber (TE SPM-40)

Product Description

Fiberego's TE SPM-40, a 40mm transparent embossed synthetic polypropylene fiber, offers an innovative and cost-effective reinforcement solution for concrete applications. Designed to emulate the benefits of steel fibers, TE SPM-40 provides enhanced mechanical properties and sustainability benefits, ideal for modern construction requirements.

Technical Specifications

Composition	100% Virgin Polypropylene
Diameter	0.2, 0.6, 0.8, 1.0mm
Length	40mm
Tensile Strength	≥400MPa
Elastic Modulus	≥4.0GPa
Elongation	20 - 25%
Alkali&Acid Resistance	High

Product Advantages

- **Enhanced Concrete Integrity:** The unique fiber design minimizes voids in the concrete matrix, improving structural strength and stability.
- **Cost-Efficient:** Serves as a viable three-dimensional reinforcement alternative to traditional rebar or wire mesh, significantly reducing material costs.
- **Safety Benefits:** Increases safety on construction sites by eliminating the need for lifting and bending of heavy steel reinforcements, thereby reducing tripping hazards.
- **Environmental Impact:** Helps in reducing embodied carbon by substituting traditional steel reinforcement with a more sustainable synthetic option.
- **Improved Durability:** Offers high chemical resistance and is corrosion-free, ensuring longevity and reduced maintenance costs.
- **Construction Efficiency:** Simplifies the construction process with no need for cutting, placing, tying, or chairing, facilitating faster project completion.
- **Advanced Performance:** Provides increased ductility, flexural toughness, and effective post-crack reinforcement, enhancing the performance under dynamic loads.

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 stabilization |
| 4. Mass concrete | |
| 5. Bridge decks | |
| 6. Sidewalks | |
| 7. Overlays | |
| 8. Precast elements | |
| 9. Industrial floors | |
| 10. Concrete linings | |
| 11. Slope stabilization | |
| 12. Sprayed concrete | |

FAQs

Q1: What makes TE SPM-40 an effective replacement for steel in concrete reinforcement?

A1: TE SPM-40 provides comparable strength and durability enhancements as steel but with added benefits of corrosion resistance and reduced environmental impact.

Q2: How does TE SPM-40 contribute to reducing construction time?

A2: By eliminating traditional rebar installation steps, TE SPM-40 simplifies and speeds up the construction process, enabling quicker project turnovers.

Q3: Can TE SPM-40 be used in all types of concrete applications?

A3: Yes, TE SPM-40 is versatile and effective in a wide range of concrete applications including pavements, bridge decks, and industrial slabs, suitable for both temporary and permanent installations.

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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