PDS

Polytwist® PTB 36

Enhanced Polypropylene-Based Macro Synthetic Fiber Reinforcement for Topping Concrete Applications

Polytwist® PTB 36 is a structural macro synthetic fiber reinforcement manufactured from 100% pure copolymer/polypropylene material, consisting of twisted (twist) monofilament fiber bundles. Developed specifically for topping concrete applications, its twisted structure and fibrillated fibers provide long-lasting durability without corrosion risk, while also minimizing plastic shrinkage cracks. Polytwist® PTB 36 eliminates the need for traditional steel mesh (welded wire) and steel reinforcement bars. It is corrosion-resistant, non-magnetic, and fully resistant to both alkalis and acids. Its soft texture ensures that it is better embedded during finishing, preventing surface exposure and reducing the need for excessive troweling.
Thanks to its fibrillated structure, it also eliminates the need for additional microfibers. Its blended composition offers both primary reinforcement and micro reinforcement for crack prevention in a single product.

Applications

- Topping Concrete
- Protective Concrete
- Slope Concrete
- Screed Concrete

Advantages

Single Product Comprehensive Solution: Twisted macro fibers act as the primary reinforcement, delivering load-bearing capacity. Fibrillated fibers help reduce potential shrinkage cracks caused by drying and temperature fluctuations.

Smooth Surface Finishing: Its soft and twisted structure requires less polishing and labor for a smoother surface appearance

End to Corrosion Risks: Unlike steel reinforcement, its polymer structure eliminates corrosion risks, contributing to more durable and longer-lasting concrete designs.

Homogeneous Distribution in 3 Dimensions: With its filament count, it evenly distributes throughout the concrete, ensuring maximum crack bridging performance.

More Environmentally Friendly: Its carbon footprint per cubic meter of concrete is negligible compared to steel mesh and steel fibers.

Usage Instructions and Mixing

Depending on the project requirements, Polytwist® PTB36 recommended dosages vary between 2 kg/m^3 and 5 kg/m^3 . Homogeneous mixture is obtained by addition of Polytwist® PTB36 to the aggregate band at the concrete batching plant or by mixing in a high speed concrete mixer (on-site or at the concrete plant) for at least 5 minutes in the field. It is recommended to use plasticizer additives at high fiber dosages.

Packaging Types

- 3 and 5 kg recycled PE pack or 1 kg degradable packaging.
- Custom packaging available if requested.

Dosing

Polytwist® PTB36 macro synthetic fibers can be used as reinforcement instead of steel mesh and steel fiber within concrete. Our engineering department provides technical assistance on demand for necessary project calculations such as energy (joule) absorption and flexural capacity calculations. We state that it is the customer's responsibility if the dosage deviates from the values specified in the TDS or does not rely on a structure report provided by Polyfibers. In such cases, Polyfibers will not assume any responsibility or warranty for the product's performance.

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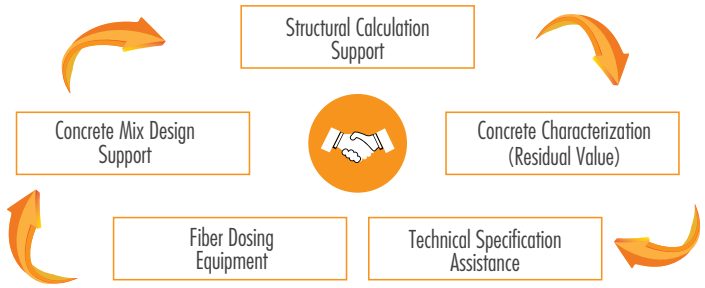
REINFORCEMENT SOLUTIONS

Full Solution



Storage & Disposal

- It is recommended to store fibers within original packages, between +5°C and 30°C, protected from moisture and direct sunlight.
- Should not be stored near flammable or oxidizing materials.
- Should not be stacked unless proper precautions are taken.
- It is the responsibility of the end user to dispose the product and the package.

Typical Properties - Polytwist® PTB 36

Composition	100% virgin polypropylene copolymer
Type	Macro synthetic fiber reinforcement for structural use
Geometric Shape	Twisted bundle / fibrile
Standards & Certifications	EN 14889-2 Type II, ASTM C1116 Type III, ASTM D7508, ICC AC 383, CE 1922-CPR-2164
Available Lengths	Standard Length 36 mm
Aspect Ratio Avg.	75
Color	White or Gray
Specific Weight	0.91gr / cm^3
Elastic Modulus	8.5 GPa
Tensile Strength	600-650 MPa
Number of Fibers	150000+/kg
Corrosion	Non-corrosive
Water Absorption	N/A
Chemical Resistance	Excellent alkali resistance
Cement Compatibility	Excellent
Magnetism	Non-magnetic
Melting Point	165°C
Ignition Point	> 360°C

LEGAL DISCLAMIER

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