



Applications

Field Applications

- Industrial Floors
- Slabs on grade
- Underground Stations & Walkways
- Concrete Pavements
- Logistics Facility Floors
- Slabtrack and Sleepers
- Extruded Curbs and Gutters

Coastal Structures & Ports

- Ports and Piers
- Shipyards
- Marinas

Water Structures

- Hydroelectric Power Plants
- Irrigation Projects
- Channels
- Drinking Water Projects

Residential Applications

- Parking Lot Floors
- Residential Driveways
- Screed Concrete

Precast Elements

- Concrete Pipes and Blocks
- Segments
- Walls

Mining

- Shotcrete Applications
- Underground Spaces
- Walkway Concrete

Tunnels

- Tunnel Floors
- Tunnel Segment Linings
- Ground Stabilization

NOTE: If the slab thickness is below 12 cm, Polytwist® PT36 should be preferred.

Polytwist® PT54

Twisted Macro Synthetic Fiber Reinforcement That Provides Excellent Surface Finishing Together With High Performance And Long Service Life In Concrete, Even Under Heavy And Intense Traffic Loads

Polytwist® PT54 made of 100% virgin copolymer polypropylene, consists of twisted bundles of monofilament fibers, are used for structural concrete reinforcement. Its high performance structure yields maximum durability without corrosion, magnetic and alkali risk. Great number of fibers resulted by its low density allows to achieve three-dimensional reinforcement in concrete matrix. While preventing shrinkage cracks and providing temperature reinforcement, Polytwist® PT54 fibers provide ductility, high energy absorption and flexural toughness to concrete and eliminate the need for steel mesh and steel fibers.

Usage Instructions and Mixing

Depending on the project requirements, Polytwist® PT54 recommended dosages vary between 2 kg/m³ and 5 kg/m³. Homogeneous mixture is obtained by addition of Polytwist® PT54 to the aggregate band at the concrete batching plant or by mixing in a high speed concrete mixer for at least 5 minutes in the field. It is recommended to use plasticizer additives at high fiber dosages.

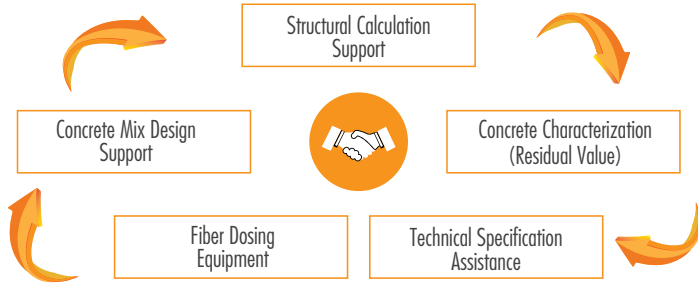
Packaging Types

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

Dosing

Polytwist® PT54 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.

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® PT54

Composition	100% virgin polypropylene copolymer
Type	Macro synthetic fiber reinforcement for structural use
Geometric Shape	Twisted bundle
Standards & Certifications	EN 14889-2 Type II, ASTM C1116 Type III, ASTM D7508, ICC AC 383, CE 1922-CPR-2164
Available Lengths	Standard Length 54 mm Other lengths 25-30-40-48-50 mm are available upon request
Aspect Ratio Avg.	112
Color	White or Gray
Specific Weight	0.91 gr / cm ³
Elastic Modulus	8.5 GPa
Tensile Strength	600-650 MPa
Number of Fibers	100000+ / 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 DISCLAIMER

The information in this technical document is based on our scientific and practical knowledge. **Polipropilen Elyaf San. ve Dış Tic. A.Ş.** is responsible solely for the quality of the product. **Polipropilen Elyaf San. ve Dış Tic. A.Ş.** cannot be held liable for any consequences resulting from the use of the product beyond the written recommendations for its application or from any misuse. This technical document is valid until a new edition is issued, at which point previous versions become invalid.

Polipropilen Elyaf San. ve Dış Tic. A.Ş.

Corporate Office: Cumhuriyet Mah. Yüzyıl Cad. No: 64 Kartal - İstanbul

Factory: Bilecik Kayı Osb Mahallesi 18. Cadde İdari Bina No: 7 İç Kapı No :1 Merkez / Bilecik

Tel: +90 216 452 90 16 - info@polyfibers.com

www.polyfibers.com