

Technical Data Sheet (TDS)

Blended Monofilament Macro Fiber (HTM® Mono Blend)

Product Description

■ PIONEER® HTM® Mono Blend is a high-performance macro synthetic fiber blend engineered for advanced crack control, durability, and improved post-crack load capacity in fiber-reinforced concrete. The blend consists of HTM® Mono macro fibers and HPM® PP microfibers, creating a robust 3D reinforcement system that enhances toughness and reduces both plastic and drying shrinkage cracking. Suitable for shotcrete, slabs, pavements, precast elements, and infrastructure applications.

Technical Specifications

Property	Value	Micro Fiber
Material	Virgin Polypropylene	Virgin Polypropylene
Type	Monofilament macro	Monofilament micro
Length	32 mm	19 mm
Diameter	0.43 mm	0.03 mm
Tensile Strength	600 MPa	400 MPa
Elastic Modulus	7 GPa	4.5 GPa
Specific Gravity	0.91 g/cm ³	0.91 g/cm ³
Color	White	White
Chemical Resistance	Excellent (acid/alkali resistant)	
Melting Point	~160°C	~160°C

Standards Compliance

- ASTM C1116/C1116M – Standard Specification for Fiber-Reinforced Concrete
- ASTM D7508 – Standard Specification for Macro Synthetic Fibers for Concrete

Recommended Dosage

- Typical: 3.0 kg/m³
- Range: 1.8 – 4.5 kg/m³, depending on structural and durability requirements

Applications

- Industrial floors and slabs-on-ground
- Composite metal decks
- Pavement overlays
- Shotcrete (tunnels, slopes, underground structures)
- Precast pipes, panels, tanks, and vaults
- Bridge decks, ramps, parking structures
- Mass concrete structures requiring enhanced toughness

Performance Benefits

- Superior crack control in plastic and hardened stages
- Enhanced post-crack load capacity and impact resistance
- Replaces welded wire mesh and steel fibers in many structural systems
- Enables thinner slabs without compromising performance
- Lightweight, corrosion-resistant, and non-magnetic
- Provides smooth surface finish suitable for architectural concrete
- Cost-effective, easy to handle, and safe for workers

Packaging Options

- Bulk Packaging: 500 kg – 1000 kg super sacks
- Small Packs: 0.9 kg or 1.0 kg water-soluble or plastic bags
- Private Labeling: OEM/ODM services available upon request

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Storage Instructions

- Store in a dry, cool, and well-ventilated area
- Protect from direct sunlight and moisture
- Keep bags sealed until ready for use

Contact Information

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