

UHMWPE FIBER

Ultra-High Molecular Weight Polyethylene Fiber

Wide Range of Specifications
for Various Applications



Ultra-High
Strength



Lightweight



Excellent
Chemical
Resistance



UV
Resistance



Dimensional
Stability



Product Introduction

UHMWPE (Ultra-High Molecular Weight Polyethylene) fiber is one of the world's strongest fibers, offering ultra-high specific strength, low density, excellent chemical resistance, low moisture absorption and good fatigue resistance. It is widely used in ropes, ballistic protection, composites, marine, outdoor and other high-performance applications.

Available Specifications

Fineness Range
20-3000 Denier
(22-3330 dtex)



Other specifications
on request.

Product Forms

Single Yarn
 Multi-filament Yarn
 Twisted Yarn
 Braided Yarn
 UD (Unidirectional)
 Fabric
 Woven Fabric
 Custom Structures

Grade Options

Standard Grade
 (General Purpose)
 High Modulus Grade
 Low Creep Grade
 UV Stabilized Grade
 Color Options
 (White, Black, Others)

Typical Technical Data (Reference)

Property	Typical Value	Test Method
Linear Density (Denier)	20-3000	ASTM D885
Linear Density (dtex)	22-3330	ASTM D885
Tensile Strength (cN/dtex)	≥ 30-45 (depending on grade)	ASTM D2256
Tensile Modulus (cN/dtex)	≥ 800-1600 (depending on grade)	ASTM D2256
Elongation at Break (%)	2.5-4.0	ASTM D2256
Density (g/cm³)	0.97	ASTM D792
Melting Point (°C)	~ 135	DSC (ASTM D3418)
Limiting Oxygen Index (LOI) (%)	~ 17-18	ASTM D2863
Moisture Regain (%)	≤ 0.01	ASTM D570
UV Resistance	Good (improved with UV stabilizer)	Internal Method
Color	White (standard), Black, Others on request	-

Note: The above data are typical values for reference only. Final values are subject to our factory's official TDS.

Key Features

- ✓ Ultra-high specific strength
- ✓ Lightweight (density 0.97 g/cm³)
- ✓ Excellent chemical resistance
- ✓ Low moisture absorption (≤ 0.01%)
- ✓ Good fatigue and impact resistance
- ✓ UV resistant (with stabilizer)
- ✓ Multiple grades and specifications
- ✓ Customizable yarn and fabric structures
- ✓ Samples available
- ✓ Global supply

*Your Reliable
Material Partner*

Application Areas



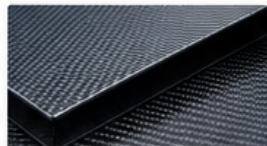
Marine & Offshore

Ropes, mooring lines, fishing nets, winches



Ballistic Protection

Bulletproof vests, helmets, protective panels



Composite Reinforcement

UD fabric, woven fabric, high-performance composites



Outdoor & Sports

Climbing ropes, safety ropes, paragliding lines



Industrial Applications

Slings, lifting straps, industrial sewing threads

