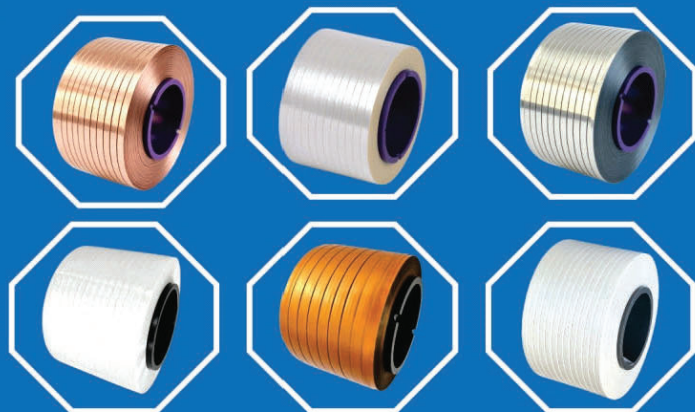


麦瑞特电缆材料

MERIT CABLE MATERIALS

创于2009年~

WIRE & CABLE MATERIALS



Company Profile

麦瑞特电缆材料（昆山）有限公司是专业从事电线电缆、光缆及电子通讯产品专用屏蔽、隔离和填充材料研发、生产与销售的高新技术企业。我们致力于为全球客户提供创新的EMI/RFI屏蔽解决方案，确保高频信号传输的稳定性，有效解决图像传输干扰和音频串音问题。公司拥有先进的制造设备、成熟的加工工艺和完善的质量管理体系，产品广泛应用于5G通信、新能源汽车、工业自动化和消费电子等领域。

Merit Cable Materials (Kunshan) Co., Ltd. is a high-tech enterprise specializing in the R&D, production, and sales of shielding, isolation, and filling materials for wires & cables, optical fibers, and electronic communication products. We are committed to providing innovative EMI/RFI shielding solutions to ensure stable high-frequency signal transmission, effectively addressing image interference and audio crosstalk. With advanced manufacturing equipment, mature processing technologies, and a comprehensive quality management system, our products are widely used in 5G communications, new energy vehicles, industrial automation, consumer electronics, and more.

◆主要产品◆

Main Products

产品类别 / Category	典型应用 / Typical Applications
铝箔麦拉系列 Aluminum Foil Mylar Series	Characteristics: Electromagnetic shielding (>60dB), lightweight, heat-sealable Applications: 5G communication cables, automotive Ethernet cables, coaxial cables
PTFE聚四氟乙烯系列 PTFE Series	Characteristics: High temperature resistance (-200°C to +260°C), low friction coefficient, chemical inertness Applications: High-frequency cables, aerospace wire harnesses, medical device wires
PI聚酰亚胺系列 PI (Polyimide) Series	Characteristics: Ultra-high temperature resistance (300°C+), high strength, excellent electrical insulation Applications: High-temperature motor windings, flexible circuit boards, satellite cables
电缆无纺布系列 Cable Nonwoven Series	Characteristics: Flame retardant (UL94 V0), sound-absorbing and shock-absorbing, environmentally friendly and recyclable Applications: New energy vehicle wire harness filling, data center cable wrapping
高温阻燃系列 High Temperature Flame Retardant Series	Characteristics: Fire-resistant (950°C/90min), arc-resistant, halogen-free and low-smoke Applications: Nuclear power plant containment cables, subway tunnel trunk lines
半导电绕包带系列 Semi-Conductive Wrapping Tape Series	Characteristics: Precise resistance control (10^2 – $10^6\Omega$), electric field equalization Applications: High-voltage cable shielding layers, superconducting cable transition sections
电缆填充绳系列 Cable Filling Rope Series	Characteristics: Tensile strength (>50N/mm ²), water-blocking and swelling, weather resistance Applications: Submarine optical cable compression-resistant filling, robotic joint wire harnesses

◆质量承诺◆

Quality Commitment

- 所有产品均通过第三方检测机构认证（如SGS、TÜV）
All products are certified by third-party testing agencies (e.g., SGS, TÜV)
- 提供完整的技术文档（规格书、测试报告、MSDS）
Provides complete technical documentation (spec sheets, test reports, MSDS)
- 24个月质量保证，全程跟踪服务
24-month quality guarantee with full-process follow-up services

Directory

A、High-Performance Wrapping Tape Series

- | | |
|---|--|
| 1. ePTFE unsintered wrapping tape-----01 | 5. PI film mica tape-----05 |
| 2. PTFE sintered wrapping tape-----02 | 6. Polyimide adhesive tape-----06 |
| 3. Polyimide wrapping tape-----03 | 7. PET cloth-based adhesive tape-----07 |
| 4. PI composite film wrapping tape-----04 | 8. Metal strip winding isolation tape-----08 |

B、Shielding Wrapping Tape Series

- | | |
|---|--|
| 1. Single-sided aluminum foil Mylar tape-----09 | 8. Copper foil Mylar tape-----16 |
| 2. Double-sided aluminum foil Mylar-----10 | 9. Hot-melt copper foil Mylar-----17 |
| 3. Hot-melt aluminum foil Mylar tape-----11 | 10. Copper-plated Mylar tape-----18 |
| 4. Aluminum-plastic composite tape-----12 | 11. Cable aluminum tape-----19 |
| 5. Winged aluminum foil Mylar tape-----13 | 12. Galvanized steel tape-----20 |
| 6. Graphene aluminum foil Mylar tape-----14 | 13. Silver-plated copper tape-----21 |
| 7. Aluminum foil PI composite film-----15 | 14. Aluminum foil Mylar adhesive tape-----22 |

C、Insulation Wrapping Tape Series

- | | |
|--|---|
| 1. PET polyester tape-----23 | 10. Thin PP foam tape-----32 |
| 2. Flame-retardant PET polyester tape-----24 | 11. PPD wrapping tape-----33 |
| 3. Hot-melt Mylar tape-----25 | 12. PE wrapping tape-----34 |
| 4. Cable cotton paper tape-----26 | 13. PVC wrapping tape-----35 |
| 5. Cable kraft paper tape-----27 | 14. EVA wrapping tape-----36 |
| 6. Aramid paper tape-----28 | 15. Printing machine ribbon-----37 |
| 7. Cable CPP tape-----29 | 16. Low-temperature color-coding tape-----38 |
| 8. Transparent PP tape-----30 | 17. High-temperature color-coding tape-----39 |
| 9. PP foam tape-----31 | 18. Polyester film adhesive tape-----40 |

D、Non-Woven Wrapping Tape Series

- | | |
|---|--|
| 1. Lightweight non-woven fabric-----41 | 6. Single-sided conductive non-woven fabric-46 |
| 2. Lightweight FR non-woven fabric-----42 | 7. Plain-weave FR non-woven fabric-----47 |
| 3. Lightweight conductive non-woven fabric-43 | 8. Reinforced non-woven fabric-----48 |
| 4. Plain-weave non-woven fabric-----44 | 9. Embossed dot non-woven fabric-----49 |
| 5. Plain-weave conductive non-woven fabric-45 | 10. Water-blocking tape-----50 |

E、Flame-Retardant Wrapping Tape Series

- | | |
|--------------------------------|---|
| 1. Phlogopite mica tape-----51 | 4. LSZH flame-retardant tape-----54 |
| 2. Synthetic mica tape-----52 | 5. Flame-retardant fiberglass tape-----55 |
| 3. Calcined mica tape-----53 | 6. Thin flame-retardant cloth tape-----56 |

F、Semiconductive Wrapping Tape Series

- | | |
|---|---|
| 1. Semi-conductive water-blocking tape----57 | 5. Semi-conductive cotton cloth tape-----61 |
| 2. Semi-conductive non-woven fabric tape---58 | 6. Semi-conductive buffer tape-----62 |
| 3. Semi-conductive nylon tape-----59 | 7. Semi-conductive crepe paper-----63 |
| 4. Semi-conductive Tetoron tape-----60 | |

G、Cable Filling Cord Series

- | | |
|--|---|
| 1. PP mesh filling rope-----64 | 12. Aramid filament-----75 |
| 2. Transparent PP mesh filling rope-----65 | 13. Water-blocking yarn-----76 |
| 3. Flame-retardant PP mesh filling rope-----66 | 14. Polypropylene PP yarn-----77 |
| 4. Lightweight high FR filling rope-----67 | 15. Fiberglass yarn-----78 |
| 5. Cable cotton thread-----68 | 16. Fiberglass rope-----79 |
| 6. Cable hemp rope-----69 | 17. Flame-retardant rock wool rope-----80 |
| 7. High-strength polyester filament-----70 | 18. Kraft paper rope-----81 |
| 8. High-strength polyester thread-----71 | 19. Polyethylene PE monofilament-----82 |
| 9. FR high-strength polyester filament-----72 | 20. Polypropylene PP monofilament-----83 |
| 10. High-strength nylon filament-----73 | 21. Polyester PET monofilament-----84 |
| 11. High-strength polypropylene filament---74 | 22. PTFE fiber filament-----85 |

ePTFE Insulation Wrapping Tape

1. Product Overview

Product Name: ePTFE Insulation Wrapping Tape

Material: Modified PTFE

Form: Microporous membrane

Process: Uniaxial stretching expansion

Description: A porous polymer made by physically modifying PTFE. Inherits PTFE's chemical stability, weather resistance, flame retardancy, and electrical insulation. The unique microporous structure provides low dielectric constant, low loss, high flexibility, optional air permeability, and high mechanical strength. The expanded structure reduces density for lightweight design while maintaining electrical performance.

Main Function: Wrapping insulation layer for high-end cables — high-speed transmission lines, robot cables, aerospace wires, low-loss coaxial cables, high-temperature cables — providing reliable electrical insulation and signal transmission.



2. Main Application Areas

High-Speed Data Cables: PCIe/QSFP, USB 3.0/3.1/4.0, HDMI 2.0/2.1, DisplayPort

Robotic Flexible Cables: Drag chain cables, industrial robot cables, servo motor wires

Aerospace Harnesses: Aircraft internal wiring, satellite connections, spacecraft cables

Low-Loss Coaxial Cables: RF cables, microwave transmission lines, antenna feeders

High-Temp Cables: Automotive engine compartment harnesses, furnace cables, specialty industrial cables

Military Cables: Radar systems, EW equipment, military communication cables

Precision Instrument Wires: Medical devices, test instruments, precision electronics

Semiconductor Equipment: Cleanroom drag chain cables, cleanroom cables, vacuum cables

3. Specifications & Physical/Mechanical Properties

Property	Unit	Specification				
Nominal Thickness	mm	0.05	0.075	0.1	0.127	0.254
Thickness Tolerance	mm	±0.003	±0.005	±0.006	±0.008	±0.01
Density	g/cm ³	0.5 ~ 1.6 (Std. 0.75 ± 0.05, customizable)				
MD Tensile Strength	MPa	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40
MD Elongation at Break	%	≥ 60	≥ 60	≥ 60	≥ 60	≥ 60

4. Electrical Performance

Property	Unit	Specification	Remarks
Dielectric Constant (ε _r)	—	1.3 ~ 1.4 (Typ. @1MHz)	Low loss signal transmission
Dissipation Factor (tanδ)	—	≤ 0.0005 (Typ. @1MHz)	Ultra-low loss
Volume Resistivity	Ω·cm	≥ 1 × 10 ¹⁷	High insulation resistance
Surface Resistivity	Ω	≥ 1 × 10 ¹⁵	Excellent surface insulation
LOI	%	≥ 95	Near non-flammable

5. General Properties

Property	Specification	Remarks
Chemical Stability	Excellent	Resistant to strong acids, bases, most organic solvents and chemicals
Weather Resistance	Excellent	UV aging resistant, suitable for long-term outdoor use
Long-Term Service Temp	-240°C ~ +260°C	Wide range
Short-Term Temp Resistance	Higher	Withstands higher thermal shock
Moisture Resistance	Excellent	Non-hygroscopic, stable
Mildew Resistance	Excellent	Mold-free
Salt Spray Resistance	Excellent	Corrosion resistant
Flame Retardancy	Excellent	LOI ≥95%, self-extinguishing

6. Other Characteristics

Appearance: Uniform, no visible impurities, holes, or damage. Natural color or custom colors.

Flexibility: Smooth surface, bend and abrasion resistant; suitable for dynamic bending (robot cables, drag chain cables).

Air Permeability: Controllable microporous structure; specific permeability available (e.g., foamed cable insulation).

Coefficient of Friction: Ultra-low, smooth surface; enables high-speed wrapping with reduced resistance.

7. Packaging & Storage

Packaging: Sheet / spool (tray); Core: rigid plastic / paper tube

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable)

Tape Width: Slittable per customer; min. 2 mm, tol. ±0.1 mm

Continuous Length: 3000 ~ 6000 m/roll (depends on thickness and core OD)

Identification: Product name, model, spec (thickness × width), batch no., production date, manufacturer

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

PTFE Sintered Wrapping Tape

1. Product Overview

Product Name: PTFE Sintered Wrapping Tape

Material: Pure PTFE

Form: Dense film

Process: Molded, sintered, then skived or calendered

Description: Made from pure PTFE resin through molding, high-temperature sintering, and precision skiving. Unlike unsintered tape, this product is fully sintered to a fully crystalline state, offering high density, dimensional stability, superior mechanical strength, and extremely low thermal shrinkage. It inherits PTFE's chemical stability, weather resistance, flame retardancy, and electrical insulation, while the dense structure delivers higher dielectric strength and mechanical performance.

Main Function: Wrapping insulation layer for high-end cables — high-frequency transmission lines, aerospace wires, high-temperature cables, military cables — providing reliable electrical insulation and signal transmission.



2. Main Application Areas

High-Frequency High-Speed Cables: Microwave coaxial cables, low-loss phase-stable cables, RF cables

Aerospace Harnesses: Aircraft internal wiring, spacecraft internal connections, high-temperature cables

High-Temp Industrial Cables: Automotive engine compartment harnesses, furnace cables, specialty industrial cables

Precision Instrument Wires: Medical devices, test instruments, precision electronics

Semiconductor Equipment: Vacuum cables, cleanroom equipment internal wiring

Military Cables: Radar systems, EW equipment, military communication cables

3. Specifications & Physical/Mechanical Properties

Property	Unit	Specification					
Nominal Thickness	mm	0.025	0.035	0.05	0.08	0.1	0.2
Thickness Tolerance	mm	±0.003	±0.003	±0.003	±0.005	±0.005	±0.008
Density	g/cm ³	2.2 ± 0.05 (Typ., all specs)					
MD Tensile Strength	MPa	≥ 60	≥ 60	≥ 60	≥ 60	≥ 60	≥ 60
MD Elongation at Break	%	≥ 80	≥ 80	≥ 80	≥ 80	≥ 80	≥ 80
Thermal Shrinkage (260°C, 30min)	%	≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5

4. Electrical Performance

Property	Unit	Specification	Remarks
Dielectric Strength	kV/mm	≥ 60	Varies with thickness; typical value
Dielectric Constant (ε _r)	—	1.8 ~ 2.2 (Typ. @1MHz)	Low loss signal transmission
Dissipation Factor (tanδ)	—	≤ 0.0003 (Typ. @1MHz)	Ultra-low loss
Volume Resistivity	Ω·cm	≥ 1 × 10 ¹⁷	High insulation resistance
Surface Resistivity	Ω	≥ 1 × 10 ¹⁵	Excellent surface insulation
LOI	%	≥ 95	Near non-flammable

5. General Properties

Property	Specification	Remarks
Chemical Stability	Excellent	Resistant to strong acids, bases, most organic solvents and chemicals
Weather Resistance	Excellent	UV aging resistant, suitable for long-term outdoor use
Long-Term Service Temp.	-200°C ~ +260°C	Wide range
Short-Term Temp. Resistance	300°C	Withstands higher thermal shock
Moisture Resistance	Excellent	Non-hygroscopic, stable
Mildew Resistance	Excellent	Mold-free
Salt Spray Resistance	Excellent	Corrosion resistant
Flame Retardancy	Excellent	Self-extinguishing

6. Other Characteristics

Appearance: Smooth, uniform surface (white or milky white); free from impurities, holes, or scratches.

Color: Natural; optional colors (red, orange, yellow, blue, green, black, gray, etc., customizable).

Flexibility: Smooth surface, abrasion and bend resistant; suitable for dynamic bending applications.

Dimensional Stability: Fully sintered; ultra-low thermal shrinkage (<1.5%); no deformation risk during subsequent cable processing or use.

Mechanical Strength: Tensile strength ≥60 MPa, superior to unsintered tape; good tear and creep resistance.

Coefficient of Friction: Ultra-low (<0.1), smooth surface; enables high-speed wrapping with reduced resistance.

7. Packaging & Storage

Packaging: Sheet / spool (tray); Core: rigid plastic / paper tube

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable)

Tape Width: Slittable per customer; min. 2 mm, tol. ±0.1 mm

Continuous Length: 3000 ~ 10000 m/roll (depends on thickness and core OD)

Identification: Product name, model, spec (thickness × width), batch no., production date, manufacturer

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Polyimide Film Wrapping Tape

1. Product Overview

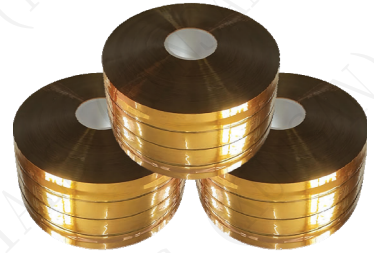
Product Name: Polyimide Film Wrapping Tape

Material: Aromatic Polyimide

Product Models: PI-25, PI-30, PI-50, PI-75 (named by total thickness)

Description: A high-performance specialty engineering plastic film made from pyromellitic dianhydride (PMDA) and aromatic diamine through polycondensation, casting, and high-temperature imidization. Combines extreme temperature resistance, superior electrical insulation, outstanding mechanical strength, and excellent chemical stability — an ideal insulation and packaging material for harsh environments.

Main Function: Insulation wrapping for high-end wires and cables, insulation protection for electronic components, flexible circuit substrates, and high-temperature insulation requiring lightweight, high-reliability performance.



2. Main Application Areas

Electronics & Electrical: High-frequency transformers, high-temperature motors, specialty magnet wire insulation

New Energy Vehicles: Power battery pack insulation, high-voltage connection systems, drive motor windings

Energy & Industry: Radiation-resistant cables for nuclear equipment, high-temperature sensors, specialty industrial cables

Aerospace: Aircraft engine harnesses, satellite and spacecraft equipment insulation

Flexible Electronics: Flexible printed circuit (FPC) substrates or coverlay

3. Physical & Mechanical Properties

Property	PI-25	PI-30	PI-50	PI-75	PI-100
Total Thickness	25 μm	30 μm	50 μm	75 μm	100 μm
Thickness Tolerance	$\pm 2 \mu\text{m}$	$\pm 2 \mu\text{m}$	$\pm 3 \mu\text{m}$	$\pm 3 \mu\text{m}$	$\pm 3 \mu\text{m}$
MD Tensile Strength	180 MPa	180 MPa	170 MPa	170 MPa	170 MPa
TD Tensile Strength	165 MPa	165 MPa	160 MPa	160 MPa	160 MPa
Elongation at Break	$\geq 50\%$	$\geq 50\%$	$\geq 50\%$	$\geq 50\%$	$\geq 50\%$
Density	$1.425 \pm 0.01 \text{ g/cm}^3$				
Water Absorption	$\leq 4.0\%$				
Thermal Shrinkage @150°C	$\leq 0.35\%$				
Thermal Shrinkage @400°C	$\leq 2.5\%$				

4. Electrical Performance

Property	Specification				
Dielectric Strength (AC) V/ μm	235	222	195	175	148
Relative Dielectric Constant (50Hz, 23°C)	3.5 ± 0.4				
Relative Dielectric Constant (1kHz, 23°C)	3.4 ± 0.4 — low dielectric constant, favorable for high-frequency signal transmission				
Dissipation Factor (50Hz, 23°C)	$\leq 4.0 \times 10^{-3}$				
Volume Resistivity	$\geq 1.0 \times 10^{16} \Omega\cdot\text{cm}$ — high insulation resistance				
Surface Resistivity	$\geq 1.0 \times 10^{15} \Omega$ — excellent surface insulation				

5. General Properties

Temperature Resistance: Long-term service -269°C to +260°C; short-term withstands above 400°C

Chemical Stability: Resistant to most organic solvents, oils, acids, and weak bases; not resistant to strong bases

Radiation Resistance: Excellent; withstands high-energy radiation

Flame Retardancy: Inherently flame retardant, UL 94 V-0, LOI > 36%

6. Other Characteristics

Flexibility: Excellent, resistant to repeated bending; suitable for dynamic applications

Dimensional Stability: Extremely low coefficient of thermal expansion and hygroscopic expansion

Surface Characteristics: Glossy, matte, or single/double-sided high-temperature adhesive coating (e.g., fluororesin adhesive) available upon request

7. Packaging & Identification

Packaging: Rolled on rigid plastic cores, moisture-proof vacuum sealed

Core ID: $76 \pm 1 \text{ mm}$ or $52 \pm 2 \text{ mm}$

Width: Slittable per customer; min. 2 mm, tol. $\pm 0.1 \text{ mm}$

Identification: Product name, model, spec (thickness $\times$ width), batch no., production date, manufacturer

Shelf Life: 12 months from production date

PI Film Mica Tape

1. Product Overview

Product Name: PI Film Mica Tape (Three-in-One PI Phlogopite Mica Tape)

Product Model: Three-in-One PI Mica Composite Tape (FMG)

Material Structure: Polyimide film (PI film) + natural phlogopite mica paper + fiberglass cloth + silicone resin adhesive

Description: A tape-form fire-resistant insulating material made with pure natural phlogopite mica paper as the substrate, polyimide film (PI film) and electrical alkali-free fiberglass cloth as double-sided reinforcing materials, and high-performance silicone resin as the adhesive, then slit after high-temperature uniform baking and drying. It inherits the excellent high-temperature resistance, electrical insulation, and chemical stability of phlogopite, while the dual reinforcement of PI film and fiberglass cloth provides higher mechanical strength and processing flexibility. Due to its outstanding performance and golden appearance, PI film is known in the industry as the "golden finger."

Main Function: Used to manufacture the insulation wrapping layer of various fire-resistant wires and cables. Under high-temperature flames, it forms a robust insulating carbonized layer, ensuring circuit integrity for a certain period under fire conditions.



2. Main Application Areas

New Energy Vehicles: Power battery thermal runaway protection; high-voltage copper/aluminum busbar insulation

Power Cables: Insulation wrapping layer for Class A/B fire-resistant power cables and control cables

Nuclear Power / Marine: Fire-resistant insulation for nuclear power plant cables and marine cables

Construction Engineering: Fire protection system lines for high-rise buildings, subways, tunnels, and other critical facilities

Aerospace: Insulation layer for high-temperature-resistant cables inside aircraft and spacecraft

Military Equipment: Insulation protection for military high-temperature-resistant wires and cables

Important Locations: Oil drilling platforms, large power stations, computer centers, communication information centers, etc.

3. Specifications & Technical Parameters

Property	Unit	FMG-0.14	FMG-0.15	FMG-0.16
Thickness	mm	0.14 ± 0.02	0.15 ± 0.02	0.16 ± 0.02
Total Weight	g/m ²	185 ± 20	200 ± 20	226 ± 22
Mica Content	g/m ²	120 ± 5	140 ± 5	160 ± 5
Fiberglass Cloth Content	g/m ²	25 ± 2	25 ± 2	25 ± 2
PI Film Content	g/m ²	18 ± 2	18 ± 2	18 ± 2
Adhesive Content	g/m ²	18 ± 3	20 ± 3	23 ± 4
Dielectric Strength	kV/layer	> 3.0	> 3.0	> 3.0
Tensile Strength	N/cm	> 120	> 120	> 120

4. General Properties

Property	Specification	Remarks
Long-Term Temperature Resistance	750 ~ 900°C	Pure natural mica, stable performance
Fire-Resistant Voltage	1 kV	No breakdown for 90 min
Insulation Resistance	≥ 1.0 MΩ	—
Flexibility	Excellent	Easy for tight wrapping; suitable for high-speed winding
Flame Retardancy	Excellent	Non-combustible material
Chemical Stability	Excellent	Resistant to acid, alkali, oil

5. Other Characteristics

Radiation Resistance: Good radiation resistance; suitable for radiation environments such as nuclear power plants

Corona Resistance: Suitable for high-voltage motors and high-frequency working conditions

Non-Toxic & Eco-Friendly: Complies with RoHS directive

Color: Golden

Executive Standards: Meets GB/T 12666.6 and IEC 60331; Class B fire-resistant wire and cable requirements

6. Packaging & Storage

Packaging: Roll form, with rigid plastic core

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable)

Tape Width: Slittable per customer requirements

Identification: Product name, model, spec (thickness × width), batch no., production date, manufacturer

Storage: Recommended in a cool, dry, ventilated warehouse; prevent mechanical damage and moisture

Shelf Life: 12 months from production date under specified packaging and storage conditions

Polyimide Composite Film / TRT Composite Film

1. Product Overview

Product Name: Polyimide Composite Film / TRT Composite Film

Product Models: FH Type (single-sided laminated), FHF Type (double-sided laminated)

Material Structure:

FH Type: Polyimide film (PI) + F-46 fluororesin (FEP) coating or PTFE coating

FHF Type: FEP layer + PI layer + FEP layer, or PTFE layer + PI layer + PTFE layer

Description: A specialty composite film based on high-performance polyimide (PI) film, coated on one or both sides with F-46 fluororesin (FEP). It inherits the excellent high/low-temperature resistance, mechanical strength, and electrical insulation of PI film, while the FEP layer introduces superior thermoplastic adhesion, chemical resistance, and low surface energy. This composite structure enables self-adhesive sealing at high temperatures, providing an ideal insulation and packaging solution for high-end cables and electronic components.

Main Function: Insulation and packaging layer for high-temperature wires, cables, magnet wires, and flexible flat cables (FFC); slot insulation for specialty motors; protection and bonding of high-temperature electronic components.



2. Main Application Areas

Aerospace wires, robot servo motor winding wires, high-temperature specialty cables, high-frequency transformer interlayer insulation, flexible printed circuit (FPC) reinforcement and coverlay, automotive electronics (engine compartment), military electronic equipment.

3. Specifications & Physical/Mechanical Properties

Property	FH35	FH50	FHF38	FHF40	FHF50
Total Thickness (μm)	35 ± 3	50 ± 3	38 ± 3	40 ± 3	50 ± 3
PI Layer Thickness (μm)	25	35	25	25	35
FEP Layer Thickness (μm)	10	15	13	15	15
Tensile Strength (MPa)	≥ 110	≥ 110	≥ 110	≥ 110	≥ 110
Elongation at Break (%)	≥ 40	≥ 40	≥ 40	≥ 40	≥ 40
Peel Strength (F-F) (N/25mm)	≥ 6	≥ 6	≥ 6	≥ 6	≥ 6
Peel Strength (F-H) (N/25mm)	≥ 4	≥ 4	≥ 4	≥ 4	≥ 4

4. Electrical Performance

Property	Specification	Remarks
Power-Frequency Dielectric Strength	≥ 150 MV/m	Excellent breakdown field strength
Surface Resistance (200°C)	≥ $1.0 \times 10^{13} \Omega$	Stable insulation at high temperature
Volume Resistivity (200°C)	≥ $1.0 \times 10^{15} \Omega \cdot \text{cm}$	High volume insulation resistance
Relative Dielectric Constant (50Hz)	≤ 3.9	Stable dielectric performance
Dissipation Factor (50Hz)	≤ 1.0×10^{-3}	Ultra-low signal loss

Note: Electrical performance is a common requirement for the FH/FHF series.

5. General Properties

Temperature Resistance: Long-term service -269°C ~ +200°C; short-term up to +300°C (depending on FEP layer)

Chemical Resistance: Resistant to most organic solvents, acids, and bases; PI layer not resistant to strong bases; FEP layer offers excellent non-stick and chemical resistance

Radiation Resistance: Excellent

Flame Retardancy: Non-combustible (both PI and FEP are UL94 V-0 materials)

Moisture Absorption: Extremely low

6. Other Characteristics

Heat-Sealing (Self-Adhesive) Performance: At high temperature (typically above FEP melting point, ~260°C) and pressure, the FEP layer melts and bonds to itself or other metal/material surfaces, forming a sealed insulation layer

Flexibility: Excellent, resistant to repeated bending

Surface Characteristics: FEP surface is smooth with non-stick properties

7. Packaging & Storage

Packaging: Roll form, with rigid plastic core

Core ID: 76 ± 1 mm or 52 ± 1 mm

Width: Slittable per customer requirements; min. 2 mm, tol. ±0.1 mm

Identification: Product name, model, spec (thickness × width), batch no., production date, manufacturer

Shelf Life: 12 months from production date

Polyimide Tape / Kapton Tape

1. Product Overview

Product Name: Polyimide Tape (Kapton Tape)

Material Structure: Polyimide film (PI) substrate + high-temperature silicone adhesive

Structure: Single-sided adhesive coating; release liner optional

Description: A specialty electrical tape made from premium polyimide film as the substrate, single-side coated with high-temperature silicone pressure-sensitive adhesive via precision coating process. It inherits the excellent high/low-temperature resistance, electrical insulation, radiation resistance, and chemical stability of polyimide film, while the silicone adhesive provides outstanding adhesion, high-temperature peelability, and no adhesive residue. Suitable for high-end applications with stringent temperature and electrical requirements.

Main Function: High-temperature masking protection for electronic/electrical equipment, electrical insulation wrapping, coil fixing, cable wrapping, lithium battery tab insulation, etc. Provides reliable protection and insulation during high-temperature processes.



2. Main Application Areas

PCB: Wave soldering masking, gold finger protection, reflow soldering masking

Electrical Insulation: Transformer coil high-temperature insulation bundling, capacitor insulation, motor slot insulation

Cables & Wires: High-temperature cable wrapping insulation, wire bundling/fixing, heat-resistant cable insulation layer

Powder Coating / Electroplating: High-temperature baking mask, powder coating masking, electroplating process protection

Die-Cutting: Can be punched into various shapes for electronic component fixing and insulation

Lithium Battery Manufacturing: Tab fixing, battery edge wrapping, battery insulation protection

3. Specifications

Property	Unit	Specification				
Total Thickness	mm	0.04	0.05	0.06	0.08	0.1
Substrate Thickness	mm	0.025	0.025	0.035	0.05	0.065
Silicone PSA Thickness	mm	0.015	0.025	0.025	0.03	0.035
Thickness Tolerance	mm	±0.005	±0.005	±0.008	±0.008	±0.010

4. Physical / Mechanical Properties

Property	Unit	Specification				
Tensile Strength	N/25mm	≥ 115	≥ 115	≥ 115	≥ 250	≥ 350
Elongation at Break	%	≥ 35	≥ 35	≥ 35	≥ 35	≥ 35
Adhesion (to Steel)	N/25mm	≥ 3.5	≥ 4.0	≥ 4.5	≥ 4.5	≥ 5.0
Release Peel Force	g/25mm	≤ 15	≤ 15	≤ 15	≤ 15	≤ 15

5. Electrical Performance

Property	Unit	Specification				
Dielectric Strength / Breakdown Voltage	kV	≥ 5.0	≥ 5.5	≥ 6.0	≥ 7.5	≥ 8.5
Volume Resistivity	Ω·cm	≥ 1 × 10 ¹⁵	≥ 1 × 10 ¹⁵	≥ 1 × 10 ¹⁵	≥ 1 × 10 ¹⁵	≥ 1 × 10 ¹⁵
Insulation Resistance	Ω	≥ 1 × 10 ¹²	≥ 1 × 10 ¹²	≥ 1 × 10 ¹²	≥ 1 × 10 ¹²	≥ 1 × 10 ¹²
Electrolytic Corrosion Factor	—	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0	≤ 1.0
Insulation Class	—	Class H	Class H	Class H	Class H	Class H

Note: Electrical performance data references typical values of mainstream industry brands.

6. General Properties

Property	Unit	Specification	Remarks
Long-Term Service Temp.	°C	-60 ~ +200	Silicone system
Short-Term Temp. Resistance	°C	260 (30 min, no residue)	High-temp test
Ultimate Temp. Resistance	°C	300 (instantaneous)	—
Flame Retardancy	—	UL510 / UL94 V-0	Compliant
Chemical Resistance	—	Excellent	Acid, alkali, solvent resistant
Radiation Resistance	—	Excellent	—

7. Other Characteristics

Appearance: Smooth, flat surface; no wrinkles, scratches, or bubbles; uniform adhesive layer, no missed coating, no particles, neat edges, no burrs

Color: Amber (most common); black (customizable, matte surface with anti-scratch and anti-fingerprint properties); transparent (customizable for special applications)

Advantages:

High-Temp No-Residue: No adhesive residue after peeling following high-temperature processes; clean and flat masking effect

Excellent Electrical Performance: High insulation strength, meets Class H insulation requirements

Superior Mechanical Properties: High tensile strength, abrasion and tear resistant

Die-Cuttable: Can be punched into various shapes after release liner lamination; easy to use

8. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed in outer carton

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 300 mm

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.1 mm

Storage: Cool, dry, clean warehouse; avoid direct sunlight and heat sources

Shelf Life: 24 months from production date (under recommended storage conditions)

PET Cloth Tape

1. Product Overview

Product Name: PET Cloth Tape / Automotive Harness Tape (Automotive-Grade PET Cloth Tape)

Material Structure: PET cloth backing + modified rubber adhesive

Structure: Single-sided tape

Description: Made with high-quality PET cloth backing, coated with modified rubber-based pressure-sensitive adhesive via precision coating. Features low VOC, hand-tearable, excellent chemical resistance, flexible, and easy to handle. Smooth surface treatment makes it suitable for both machine processing and manual operation, especially for automotive harness wrapping.

Main Function: Wrapping protection, bundling/fixing, and insulation isolation for automotive harnesses; also for industrial equipment pipe wrapping, electronic component fixing, etc.



2. Main Application Areas

Automotive Harnesses: Wrapping and bundling of engine compartment and cabin interior harnesses

Industrial Equipment: Control cabinet harnesses, industrial robot cable bundling and protection

Electronics & Appliances: Internal harness fixing and insulation for home appliances

Pipe Wrapping: Surface protection for air and water pipes

3. Specifications & Physical/Mechanical Properties

Property	Unit	Typical Value / Requirement		Test Method
Thickness	mm	0.140 ± 0.030	0.250 ± 0.030	EN 1942
Basis Weight	g/m ²	120 ± 12	220 ± 20	ISO 22862
Tensile Strength	N/cm	> 40	> 23	ISO 29864
Elongation at Break	%	> 10	> 45	ISO 29864
Adhesion (to Backing)	N/cm	> 2.0	> 2.5	ISO 29862
Adhesion (to Steel)	N/cm	> 2.0	> 2.5	ISO 29862
Unwind Force	N/cm	2.0 ~ 6.0	2.0 ~ 6.0	EN 1944
Flame Retardancy	—	B (self-extinguishing)	B (self-extinguishing)	GMW 16740 / LV 312
Abrasion Resistance (5mm)	—	A: 0~100 cycles	D: 0~100 cycles	ISO 6722 / GMW 16740 / LV 312
Noise Damping	dB(A)	A: 0~2	A: 0~2	GMW 16740 / LV 312
Temperature Class	°C	C: -40~105	C: -40~150	GMW 16740 / LV 312
Backing Content	%	70	75	—
Adhesive Content	%	30	25	—

Note: Other widths, lengths, and core specifications available upon request.

4. Temperature Resistance

Property	Specification	Remarks
Service Temperature Range	-40°C ~ +105°C	Long-term use
Short-Term Temp. Resistance	120°C	Short-term withstand
Chemical Resistance	Excellent	Resistant to oil, solvents, weak acids/bases
Water & Moisture Resistance	Good	PET cloth backing is inherently waterproof
Flame Retardancy	Class B (self-extinguishing)	GMW 16740 / LV 312

5. Other Characteristics

Low VOC: Meets automotive environmental requirements; safe for cabin interior use

Hand-Tearable: No scissors needed; tear by hand to desired length for improved efficiency

Excellent Chemical Resistance: Resistant to oil, solvents, and chemicals; suitable for harsh engine compartment environments

Flexible & Easy to Handle: Smooth surface treatment; good hand feel; suitable for machine processing and manual wrapping

High Tensile Strength: PET cloth backing provides good mechanical strength; not easy to break

Flame Retardant & Self-Extinguishing: Meets Class B flame retardancy per GMW 16740 / LV 312

Abrasion Resistant & Noise Damping: Effectively reduces harness vibration and noise

6. Other Characteristics

Appearance / Color: Orange or black (standard)

Surface: Smooth and flat; no impurities, bubbles, or burrs; neat edges

Processing Performance: Hand-tearable without tools; suitable for automatic taping machines and manual operation; good flexibility; conforms to irregular surfaces

7. Packaging & Storage

Packaging: Roll form, lined with moisture-proof plastic bag, fixed in outer carton

Core ID: 38 ± 1 mm (standard); other IDs customizable (e.g., 76 mm, 52 mm)

Tape Width: Slittable per customer requirements; min. 10 mm, tol. ±0.1 mm

Standard Length: 20 m, 25 m (other lengths customizable)

Storage: In original packaging at 20~30°C, max. 65% RH, away from direct sunlight

Shelf Life: 12 months from production date

Interleaving Tape for Metal Coil Winding

1. Product Overview

Product Name: Interleaving Tape for Metal Coil Winding

Product Type: Kraft Paper / High-Temperature Non-Woven Fabric / PTFE Film / PI Polyimide Film

Description: This series is specifically designed for interlayer separation of metal coils (copper bar, aluminum bar, steel strip, etc.) during production, transportation, and storage. Based on material characteristics, four options are offered: Kraft Paper (economical), High-Temperature Non-Woven Fabric (enhanced temperature resistance), PTFE Film (anti-stick and corrosion-resistant), and PI Polyimide Film (ultra-high temperature insulation). Effectively prevents surface scratches, indentations, adhesion, and oxidation corrosion, keeping metal surfaces smooth and clean.

Main Function: Interlayer separation for metal coils; prevents scratches, indentations, adhesion, and corrosion caused by direct metal surface contact.

2. Main Application Areas

Copper Bar / Copper Strip: Coil winding separation for electrical copper bars, transformer copper strips, busway copper bars

Precious Metal Strips: Surface protection for silver strips, nickel strips, and precision alloy strips

Aluminum Bar / Aluminum Strip: Interlayer protection for aluminum bars, aluminum strips, and aluminum alloy strips

Steel Strip / Stainless Steel Strip: Coil winding separation for precision steel strips and stainless steel strips

3. Specifications & Physical/Mechanical Properties

Property	Unit	Kraft Paper	High-Temp Non-Woven	PTFE Film	PI Polyimide Film
Nominal Thickness	mm	0.06	0.06	0.035	0.025
Thickness Tolerance	mm	±0.005	±0.005	±0.003	±0.002
Basis Weight	g/m ²	48 ± 5	45 ± 5	77 ± 5	35 ± 3
MD Tensile Strength	MPa	≥ 60	≥ 45	≥ 15	≥ 180
MD Elongation at Break	%	≥ 3	≥ 10	≥ 100	≥ 50
Thermal Shrinkage	%	≤ 2.0 (105°C)	≤ 1.5 (150°C)	≤ 2.0 (200°C)	≤ 1.0 (300°C)

4. Material Properties

Property	Unit	Kraft Paper	High-Temp Non-Woven	PTFE Film	PI Polyimide Film
Material	—	Natural wood pulp kraft paper	Polyester fiber (PET)	Pure PTFE	Polyimide (PI)
Surface Characteristics	—	Smooth, uniform fiber distribution		Smooth, ultra-low friction	Smooth and flat
Color	—	Natural (yellowish brown)	White	Milky white / translucent	Amber
Coefficient of Friction	—	Moderate	Moderate	≤ 0.2	0.3 ~ 0.4
Long-Term Temp. Resistance	°C	-30 ~ +80	-40 ~ +205	-200 ~ +260	-269 ~ +260
Short-Term Temp. Resistance	°C	105	230	300	400
Chemical Stability	—	Fair	Good	Excellent	Excellent
Oil Absorption	%	≥ 100	< 10	< 1	< 1
Dielectric Strength	kV/mm	≥ 8	≥ 10	≥ 60	≥ 200
Main Advantages	—	Low cost, high cost-performance	Good temperature resistance, high strength	Ultra-low friction, non-stick, corrosion resistant	Ultra-high temp. stability, excellent insulation
Application Scenarios	—	General metal winding, cost priority	High-temp processing, strength required	Bright surface metals, high anti-stick requirements	Ultra-high temp. environments, stringent insulation requirements

5. Electrical Performance

Property	Unit	Kraft Paper	High-Temp Non-Woven	PTFE Film	PI Polyimide Film
Dielectric Strength	kV/mm	≥ 8	≥ 10	≥ 60	≥ 200
Volume Resistivity	Ω-cm	≥ 1×10 ¹⁰	≥ 1×10 ¹³	≥ 1×10 ¹⁸	≥ 1×10 ¹⁷

6. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed in carton or wooden case

Core ID: 63 ± 1 mm or 53 ± 1 mm (customizable)

Max. OD: PTFE roll ≤ 320 mm; other rolls ≤ 450 mm (customizable)

Tape Width: Slittable per customer requirements; min. 10 mm, tol. ±0.1 mm

Storage: Cool, dry, clean warehouse; avoid direct sunlight, moisture, and chemical contact

Shelf Life: Kraft Paper: 12 months; High-Temp Non-Woven: 12 months; PTFE Film: 36 months; PI Polyimide Film: 24 months

Kraft Paper



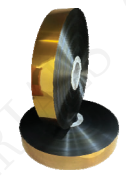
High-Temp Non-Woven



PTFE Film



PI Polyimide Film



Single-Sided Aluminum Foil Mylar Tape

1. Product Overview

Product Name: Single-Sided Aluminum Foil Mylar Tape

Material Structure: Aluminum foil (Al) + Polyester film (PET)

Structure: Two-layer composite (PET/AL)

Description: A two-layer aluminum-plastic composite tape made from high-purity aluminum foil and polyester film (PET) via precision lamination. Combines the excellent electromagnetic shielding, moisture barrier, and blocking properties of aluminum foil with the good mechanical strength, electrical insulation, and flexibility of PET film. The interlayer bond is strong, with excellent processing performance.

Main Function: Electromagnetic shielding layer and moisture barrier for communication cables, power cables, and data cables; provides reliable shielding, moisture protection, and mechanical protection for cable cores.



2. Main Application Areas

Communication Cables / Optical Cables: Shielding and moisture barrier for local communication cables, office cables, and optical cables

Data Cables: Shielding layer for USB, HDMI, network data cables, and other high-frequency transmission cables

Power Cables: Shielding and moisture barrier for control cables and instrument cables

Electronic Equipment: Shielding wrapping for electronic components, FPC reinforcement

3. Specifications & Physical/Mechanical Properties

Property	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7	Spec 8	Spec 9	Spec 10
Total Thickness (μm)	22	25	30	25	27	38	27	30	42	52
Al Foil Thickness (μm)	7	7	7	9	9	9	12	15	20	25
PET Thickness (μm)	12	15	20	12	15	25	12	12	20	25
Elongation (±10%)	30	30	30	30	30	30	30	30	30	30
Tensile Strength (MPa)	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45
Basis Weight (g/m ²)	39±5	43±5	50±5	44±10	48±10	62±10	52±10	60±10	85±10	105±10
Peel Strength (N/cm ²)	≥ 6.3	≥ 6.3	≥ 6.3	≥ 6.3	≥ 6.3	≥ 6.3	≥ 6.3	≥ 6.3	≥ 6.3	≥ 6.3

4. Electrical & Shielding Performance

Property	Specification
Surface Resistance (Ω/sq)	≤ 0.1
Volume Resistivity (Ω·cm)	≤ 1 × 10 ⁻⁶
EMI Shielding Effectiveness (dB)	≥ 70 (varies with Al foil thickness)
Dielectric Strength (PET layer)	≥ 100 kV/mm

5. General Properties

Property	Specification	Remarks
Temperature Resistance	-40°C ~ +150°C	Long-term service temperature
Chemical Resistance	Good	Resistant to most solvents, oils, weak acids/bases
Moisture Barrier	Excellent	Al foil layer provides 100% water vapor barrier
Flame Retardancy	UL94 VTM-0	Higher flame retardancy customizable

6. Other Characteristics

Appearance: Al foil surface is smooth and flat; free from pinholes, cracks, and stains; PET surface is transparent or translucent, uniform and smooth

Color: Natural aluminum (standard); PET side customizable in blue, green, transparent, copper-imitation, etc.

Flexibility: Good; suitable for wrapping, longitudinal covering, and other processes

Pinhole Count: Extremely low pinhole count in Al foil layer; meets relevant cable standard requirements

Lamination Bond: Strong bond between Al foil and PET layers; no delamination

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm, 52 ± 1 mm, or 30 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 2 mm, tol. ±0.1 mm

Identification: Product name, spec, color, width, length, batch no., production date, manufacturer

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Double-Sided Aluminum Foil Mylar Tape

1. Product Overview

Product Name: Double-Sided Aluminum Foil Mylar Tape

Material Structure: Aluminum foil (Al) + Polyester film (PET) + Aluminum foil (Al)

Structure: Three-layer composite (AL-PET-AL)

Description: A three-layer aluminum-plastic composite tape made from two layers of high-purity aluminum foil and a middle polyester film (PET) via precision lamination. Combines the excellent EMI shielding, moisture barrier, and blocking properties of aluminum foil on both sides with the good mechanical strength, electrical insulation, and flexibility of PET film. The double-sided metal structure provides superior shielding performance, suitable for applications with higher shielding requirements.

Main Function: Used as EMI shielding layer and moisture barrier for communication cables, power cables, and data cables. Especially suitable for cable structures requiring double-sided grounding or higher shielding effectiveness. Provides reliable shielding, moisture protection, and mechanical protection for cable cores.



2. Main Application Areas

Communication Cables and Optical Cables: High-efficiency shielding and moisture barrier for local communication cables, office cables, and optical cables

Data Cables: High shielding effectiveness applications for USB, HDMI, network data cables, and other high-frequency transmission cables

Power Cables: High-requirement shielding layers for control cables and instrument cables

Electronic Equipment: Shielding wrapping for electronic components, FPC reinforcement, and EMC shielding materials

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7
Total Thickness	μm	32	35	36	49	45	55	61
Al Foil Thickness (Side 1)	μm	7	7	9	9	12	12	15
PET Thickness	μm	12	15	12	25	15	25	25
Al Foil Thickness (Side 2)	μm	7	7	9	9	12	12	15
Elongation (±10%)	%	25	25	28	28	30	30	32
Tensile Strength	MPa	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45
Basis Weight	g/m ²	61±6	65±6	71±7	90±9	92±9	106±11	122±13
Peel Strength	N/cm ²	≥ 6.3	≥ 6.3	≥ 6.3	≥ 6.3	≥ 6.3	≥ 6.3	≥ 6.3

4. Electrical & Shielding Performance

Property	Specification
Surface Resistance	≤ 0.05 Ω/sq (both sides)
Volume Resistivity	≤ 1 × 10 ⁻⁶ Ω·cm
EMI Shielding Effectiveness	≥ 80 dB (varies with Al foil thickness; superior to single-sided structure)
Dielectric Strength (PET layer)	≥ 100 kV/mm

5. General Properties

Property	Specification	Remarks
Temperature Resistance	-40°C ~ +150°C	Long-term service temperature
Chemical Resistance	Good	Resistant to most solvents, oils, weak acids, and weak bases
Moisture Barrier	Excellent	Double-sided Al foil provides 100% water vapor barrier
Flame Retardancy	UL94 VTM-0	Higher flame retardancy grades customizable

6. Other Characteristics

Appearance: Both Al foil surfaces are smooth and flat; free from pinholes, cracks, and stains; neat edges; no burrs

Color: Natural aluminum on both sides (standard)

Flexibility: Good; suitable for wrapping, longitudinal covering, and other processes

Pinhole Count: Extremely low in Al foil layers; meets relevant cable standard requirements

Lamination Bond: Strong bond between Al foil and PET layers; no delamination

Shielding Advantage: Double-sided metal structure enables double-sided grounding, providing superior shielding effectiveness

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.1 mm

Identification: Product name, spec, color, width, length, batch no., production date, manufacturer

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Hot-Melt Aluminum Foil Mylar Tape

1. Product Overview

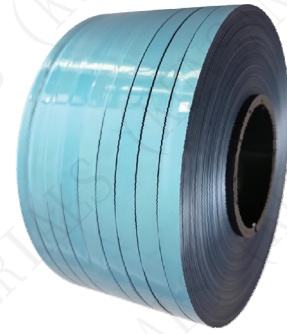
Product Name: Hot-Melt Aluminum Foil Mylar Tape

Material Structure: Aluminum foil (Al) + polyester film (PET; PE or PP customizable) + hot-melt adhesive layer (EAA)

Structure: Three-layer composite: PET-AL-EAA or AL-PET-EAA

Description: A three-layer heat-seal aluminum-plastic composite tape made from high-purity aluminum foil and polyester film (PET) via precision lamination, with a hot-melt adhesive layer (EAA) coated on the aluminum foil side. It combines the excellent EMI shielding, moisture barrier, and blocking properties of aluminum foil with the good mechanical strength, electrical insulation, and flexibility of PET film. The hot-melt adhesive layer provides excellent heat-sealing performance, forming strong bonds with polyethylene (PE), polypropylene (PP), and halogen-free polyolefin (HFPO) sheath materials under heat, creating an integrated composite sheath.

Main Function: Used as EMI shielding layer, moisture barrier, and integrated sheath for communication cables, power cables, and data cables. Provides reliable shielding, moisture protection, and mechanical protection for cable cores, and forms an integrated structure with the sheath through heat sealing.



2. Main Application Areas

Communication Cables and Optical Cables: Shielding, moisture barrier, and integrated sheath for local communication cables, office cables, and optical cables

Data Cables: Shielding and sheath bonding for USB, HDMI, network data cables, and other high-frequency transmission cables

Power Cables: Shielding and integrated sheath for control cables and instrument cables

Electronic Equipment: Shielding wrapping for electronic components, FPC reinforcement

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5
Total Thickness	μm	26	30	35	33	38
Al Foil Thickness	μm	7	7	7	9	9
PET Thickness	μm	12	15	20	15	20
Hot-Melt Adhesive Thickness	μm	4	5	5	6	6
Elongation (±10%)	%	30	30	30	30	30
Tensile Strength	MPa	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45
Basis Weight	g/m ²	40±4	46±5	52±5	56±6	62±6
Peel Strength	N/cm	≥ 6.3	≥ 6.3	≥ 6.3	≥ 6.3	≥ 6.3
Heat-Seal Strength	N/cm	≥ 17.5	≥ 17.5	≥ 17.5	≥ 17.5	≥ 17.5

4. Electrical & Shielding Performance

Property	Specification
Surface Resistance	≤ 0.1 Ω per square
Volume Resistivity	≤ 1 × 10 ⁻⁶ Ω·cm
EMI Shielding Effectiveness	≥ 70 dB (varies with Al foil thickness)
Dielectric Strength (PET layer)	≥ 100 kV/mm

5. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +105°C	Limited by adhesive layer
Short-Term Temperature Resistance	230°C	Short-term withstand, e.g., extrusion process
Chemical Resistance	Good	Resistant to most solvents, oils, weak acids, and weak bases
Moisture Barrier	Excellent	Al foil provides 100% water vapor barrier
Flame Retardancy	UL94 VTM-0	Higher flame retardancy grades customizable

6. Other Characteristics

Appearance: Al foil surface is smooth and flat; free from pinholes, cracks, and stains. PET surface is transparent or translucent, uniform and smooth. Hot-melt adhesive surface is flat and uniform.

Color: Natural aluminum (standard); PET side customizable in blue, green, yellow, transparent, etc.

Flexibility: Good; suitable for wrapping, longitudinal covering, and other processes.

Pinhole Count: Extremely low in Al foil layer; meets relevant cable standard requirements.

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm and 30 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 2 mm, tol. ±0.1 mm

Identification: Product name, spec, color, width, length, batch no., production date, manufacturer

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Aluminum-Plastic Composite Tape (APL)

1. Product Overview

Product Name: Aluminum-Plastic Composite Tape (APL)

Material Structure: Aluminum foil + Ethylene-Acrylic Acid copolymer (EAA) film

Product Models: Named by total thickness, e.g., APL-0.20, APL-0.30

Color: Natural (silver), Blue (EAA side)

Description: A metal-plastic composite tape made by laminating one or both sides of aluminum foil with an ethylene-acrylic acid (EAA) hot-melt adhesive film via precision process. The EAA layer bonds firmly to the aluminum substrate and can form high-strength, sealed heat-seal bonds with various polyolefin sheath materials (such as LDPE, MDPE, HDPE, LLDPE, and halogen-free polyolefin HFPO) under heat, forming the "integrated sheath" of cables.



Main Function: Provides reliable moisture barrier, EMI shielding, and mechanical protection for communication cables, optical cables, control cables, etc. It is the core material for constructing integrated cable sheaths.

2. Main Application Areas

Communication Cables and Optical Cables: Metallic shielding and moisture barrier for local communication cables, office cables, feeder cables, and various optical cables

Electronic Cables: Shielding layer for high-speed data cables and coaxial cables

Power Cables: Shielding and moisture protection for control cables and building wiring

Specialty Cables: Mining cables, marine cables, and other applications requiring high-reliability protection

3. Specifications & Physical/Mechanical Properties

Product Specification (Total Thickness)	Aluminum Foil Thickness	EAA Thickness	Tensile Strength	Elongation at Break	Peel Strength (EAA/Al)	Heat-Seal Strength (EAA/PE)	Peel Strength After Water Immersion (68±1°C, 168h)
0.20 mm	0.10 mm	0.05 mm	≥70 MPa	≥15%	≥6.13 N/cm	≥17.5 N/cm	≥6.13 N/cm
0.25 mm	0.15 mm	0.05 mm	≥70 MPa	≥15%	≥6.13 N/cm	≥17.5 N/cm	≥6.13 N/cm
0.285 mm	0.185 mm	0.05 mm	≥70 MPa	≥15%	≥6.13 N/cm	≥17.5 N/cm	≥6.13 N/cm
0.30 mm	0.20 mm	0.05 mm	≥70 MPa	≥15%	≥6.13 N/cm	≥17.5 N/cm	≥6.13 N/cm
0.35 mm	0.25 mm	0.05 mm	≥70 MPa	≥15%	≥6.13 N/cm	≥17.5 N/cm	≥6.13 N/cm
0.40 mm	0.30 mm	0.05 mm	≥70 MPa	≥15%	≥6.13 N/cm	≥17.5 N/cm	≥6.13 N/cm
0.45 mm	0.35 mm	0.05 mm	≥70 MPa	≥15%	≥6.13 N/cm	≥17.5 N/cm	≥6.13 N/cm
0.50 mm	0.40 mm	0.05 mm	≥70 MPa	≥15%	≥6.13 N/cm	≥17.5 N/cm	≥6.13 N/cm
0.55 mm	0.45 mm	0.05 mm	≥70 MPa	≥15%	≥6.13 N/cm	≥17.5 N/cm	≥6.13 N/cm

Note: Single-sided composite (EAA on one side of aluminum foil) or double-sided composite (EAA on both sides) structures available upon request.

4. General Properties

Property	Description and Requirements
Bonding Performance	Strong initial adhesion between EAA and aluminum substrate; high peel strength. Excellent heat-seal performance with polyolefin sheath materials, forming firm sealed joints — the technical basis for integrated sheaths.
Moisture Barrier	Aluminum layer provides near-perfect water vapor barrier (extremely low water vapor transmission rate); core of cable moisture protection.
Shielding Performance	Aluminum layer provides good EMI shielding and anti-interference capability.
Chemical Resistance	Aluminum and EAA layers have good resistance to most greases, solvents, and chemical media.
Mechanical Protection	Provides certain compressive and tensile strength to protect the cable core.
Environmental Resistance	Excellent water-boiling resistance; after high-temperature hot water immersion, the bond strength between EAA and aluminum foil remains high, ensuring long-term reliability.

5. Other Characteristics

Pinhole Count: Extremely low pinhole count on aluminum foil surface; meets relevant cable standard requirements.

Heat-Seal Temperature Range: Approximately 120°C – 150°C (depending on equipment and sheath material type).

Winding Performance: Flat, no edge curling, no obvious periodic streaks.

6. Packaging & Storage

Packaging: Roll form, with rigid paper or plastic core.

Core ID: 76 ± 1 mm or 152 ± 1 mm (customizable).

Roll OD and Length: Produced according to customer order requirements.

Identification: Product name, specification, color, width, length, batch number, production date, and manufacturer information.

Storage: Store in a cool, dry, clean warehouse; avoid direct sunlight and contact with chemicals.

Shelf Life: 12 months from the date of production under specified packaging and storage conditions.

Extended-wing Aluminum Foil Mylar Tape

1. Product Overview

Product Name: Extended-wing Aluminum Foil Mylar Tape (Butterfly Aluminum Foil Mylar Tape)

Material Structure: Aluminum foil (Al) + Polyester film (PET) + Polyester film (PET)

Structure: Three-layer asymmetric composite (aluminum foil Mylar tape secondarily laminated with wider Mylar film)

Description: A special-structure aluminum-plastic composite tape made by precision secondary lamination of slit aluminum foil Mylar tape with wider polyester film (PET). The center is an aluminum foil Mylar composite structure (Al + PET), while both sides extend into wider PET "wings," forming a unique extended-wing structure. This design combines the excellent EMI shielding of aluminum foil with the good electrical insulation and flexibility of PET film. The side-extended film provides reliable insulation and sealing.

Main Function: Used as EMI shielding layer for high-frequency cables, especially for interference shielding applications requiring external insulation covering. The side-extended film provides reliable insulation and sealing. One-pass wrapping can replace the traditional two-step process of separate aluminum foil Mylar and polyester tape wrapping, greatly reducing operations and defect rate.



2. Main Application Areas

High-Frequency Cables: Essential material for DVI, HDMI, DP, RGB, and other high-frequency cables

Twisted Pair and Composite Cables: Interference shielding for multi-conductor cables, such as control cables, computer cables, and signal transmission cables

Communication Cables: EMI shielding wrapping material for high-frequency communication, electronics, and other wires and cables

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4
Total Thickness	μm	37	40	39	42
Aluminum Foil Thickness	μm	7	7	9	9
Mylar Thickness 1	μm	12	12	12	12
Mylar Thickness 2	μm	12	15	12	15
Width Specification	mm	6+9	8+11	8+11	10+14
Elongation	%	≥35	≥35	≥35	≥35
Tensile Strength	MPa	≥73.5	≥73.5	≥73.5	≥73.5
Basis Weight	g/m ²	63±6	63±6	80±8	80±8
Resistance	Ω·μm	≤3800	≤5000	≤3800	≤5000

Note: Width specification "6+9 mm" means the aluminum foil part width is 6 mm and the extended Mylar part width is 9 mm. Other specifications follow the same pattern.

4. Electrical & Shielding Performance

Property	Specification
Surface Resistance	≤ 0.1 Ω/sq
Shielding Effectiveness	≥ 70 dB (1–100 MHz)

5. General Properties

Property	Specification	Remarks
Temperature Resistance	-40°C ~ +150°C	Long-term service temperature
Chemical Resistance	Good	Resistant to most solvents, oils, weak acids, and weak bases
Moisture Barrier	Excellent	Aluminum foil layer provides 100% water vapor barrier

6. Other Characteristics

Appearance: Center aluminum foil part is flat and smooth; both side Mylar films are transparent and uniform; free from impurities, holes, or mechanical damage.

Color: Natural aluminum, blue, silver (standard); red, green, gold, light blue, purple-red customizable.

Flexibility: Good; suitable for high-speed wrapping.

Process Advantages: One-pass wrapping replaces the traditional two-step process of separate aluminum foil Mylar and polyester tape wrapping, greatly reducing operations and defect rate.

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed in carton

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Graphene Aluminum Foil Mylar Tape

1. Product Overview

Product Name: Graphene Aluminum Foil Mylar Tape (Graphene-Coated Aluminum Foil Shielding Composite Tape)

Structure: Polyester film (PET) + adhesive + aluminum foil (Al) + graphene conductive coating

Description: An upgraded shielding material based on the traditional hot-melt aluminum foil Mylar structure, with a high-conductivity graphene coating applied to the aluminum foil surface. The PET layer provides excellent mechanical strength and insulation. The aluminum foil layer provides basic EMI shielding and 100% barrier properties. The special adhesive ensures firm lamination between PET and aluminum foil. The graphene coating greatly improves longitudinal conductivity and overlap reliability, solving the shielding performance degradation caused by oxidation and cracking of traditional aluminum foil. Especially suitable for applications with stringent high-frequency shielding requirements.

Main Function: Used as wrapping shielding layer for high-speed data cables and coaxial cables. Provides excellent EMI shielding effectiveness and ensures electrical continuity of the shielding layer.



2. Main Application Areas

High-speed transmission cables (e.g., USB4, HDMI 2.1, Thunderbolt)

High-frequency coaxial cables and RF cables

Precision industrial buses

Internal EMI shielding for high-end consumer electronics

Harness assemblies requiring high-frequency shielding effectiveness

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5
Total Thickness	μm	25	28	33	30	35
Aluminum Foil Thickness	μm	7	7	7	9	9
PET Thickness	μm	12	15	20	15	20
Graphene Coating Thickness	μm	3	3	3	3	3
Elongation (±10%)	%	30	30	30	30	30
Tensile Strength	MPa	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45

4. Electrical & Shielding Performance

Property	Specification	Remarks
Surface Resistance (graphene side)	≤ 0.1 Ω/sq	Key indicator; ensures overlap conductivity
EMI Shielding Effectiveness	≥ 90 dB (@1GHz ~ 6GHz)	Excellent high-frequency shielding
Dielectric Strength (PET layer)	≥ 100 kV/mm	PET layer provides additional insulation
Volume Resistivity (Al foil layer)	≤ 1 × 10 ⁻⁶ Ω-cm	—

5. General Properties

Chemical Resistance: PET layer resistant to most solvents and chemicals; Al foil layer resistant to oil and solvents; graphene coating chemically stable

Temperature Resistance: Long-term service -40°C ~ +105°C; short-term up to +125°C

Moisture Barrier: Excellent; Al foil provides 100% barrier

Barrier Properties: Excellent

6. Other Characteristics

Appearance: Smooth surface; free from pinholes, cracks, and stains; uniform graphene coating

Wrapping Process: Recommended to use the graphene-coated side as the overlapping contact surface with 25%~50% overlap for optimal electrical contact

Flexibility: Excellent; PET layer provides good fatigue resistance; suitable for cables subject to repeated bending

Pinhole Requirement: Extremely low pinhole rate controllable in Al foil layer; ensures high shielding and barrier performance

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed in carton

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Aluminum Foil PI Composite Film

1. Product Overview

Product Name: Aluminum Foil PI Composite Film

Material Structure: Aluminum foil (Al) + Polyimide film (PI)

Structure: Two-layer composite (PI/Al)

Description: A two-layer aluminum-plastic composite tape made from high-purity aluminum foil and polyimide film (PI) via precision lamination. Combines the excellent EMI shielding, moisture barrier, and blocking properties of aluminum foil with the excellent high/low-temperature resistance, electrical insulation, radiation resistance, and mechanical strength of PI film. Strong interlayer bond and excellent processing performance.

Main Function: Used as EMI shielding layer, moisture barrier, and insulation layer for communication cables, high-frequency data transmission cables, and aerospace wires. Provides reliable shielding, moisture protection, and insulation protection for cable cores.



2. Main Application Areas

High-Speed Data Transmission Cables: Shielding layer for QSFP, SFP, and other server internal/external connection cables; high-frequency high-speed transmission cables

Aerospace Wires: High-temperature cable insulation and shielding; spacecraft internal connection wires

Communication Equipment: 5G base station high-frequency signal shielding; optical module thermal management

Electronic Equipment: FPC shielding layer or reinforcement material; internal EMI shielding for mobile phones and computers

Industrial Equipment: Motor and transformer winding insulation; high-temperature sensor protection

Lithium Batteries: Battery electrode protection; high-temperature insulation

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4
Total Thickness	μm	22	35	25	38
Al Foil Thickness	μm	7	7	9	9
PI Thickness	μm	12	25	12	25
Elongation (±10%)	%	30	30	30	30
Tensile Strength	MPa	≥ 100	≥ 100	≥ 100	≥ 100
Basis Weight	g/m ²	38±5	58±6	42±5	62±6
Peel Strength	N/cm	≥ 6.3	≥ 6.3	≥ 6.3	≥ 6.3

Note 1: Total thickness = Al foil thickness + PI thickness + adhesive layer thickness (adhesive approx. 0.003–0.005 mm). Total thickness is a theoretical estimation; actual measured value shall prevail.

Note 2: Basis weight estimated based on Al foil density 2.70 g/cm³, PI density 1.42 g/cm³, and adhesive density 1.0 g/cm³.

4. Electrical & Shielding Performance

Property	Unit	Specification
Surface Resistance	Ω/sq	≤ 0.1
Volume Resistivity	Ω·cm	≥ 1 × 10 ¹⁵
EMI Shielding Effectiveness	dB	≥ 70 (varies with Al foil thickness)
Dielectric Strength (PI layer)	kV/mm	≥ 150

5. General Properties

Property	Specification	Remarks
Long-Term Temperature Resistance	-269°C ~ +200°C	PI layer provides excellent temperature resistance
Short-Term Temperature Resistance	+400°C	PI layer provides excellent temperature resistance
Chemical Resistance	Excellent	Resistant to most solvents, oils, weak acids, and weak bases
Radiation Resistance	Excellent	Suitable for radiation environments such as nuclear power plants and aerospace
Moisture Barrier	Excellent	Al foil layer provides 100% water vapor barrier
Flame Retardancy	UL94 V-0	Non-combustible material

6. Other Characteristics

Appearance: PI side is golden/amber, smooth and flat. Al foil side is silver/natural aluminum, smooth and flat; free from pinholes, cracks, and oxidation spots.

Flexibility: Good; suitable for wrapping, longitudinal covering, and other processes.

Pinhole Count: Extremely low pinhole count in Al foil layer; meets relevant cable standard requirements.

Lamination Bond: Strong bond between Al foil and PI layers; no delamination.

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 2 mm, tol. ±0.1 mm

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Copper Foil Mylar Tape

1. Product Overview

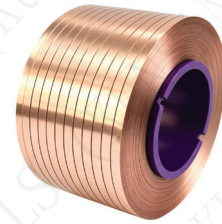
Product Name: Copper Foil Mylar Tape (Copper-Clad Polyester Film Tape)

Material Structure: Electrolytic/rolled copper foil (Cu) + polyester film (PET)

Structure: Two-layer composite (Cu/PET)

Description: A metallized composite tape made from high-conductivity copper foil and high-performance polyester film (PET) via precision hot-press lamination. It integrates the excellent conductivity and EMI shielding of copper with the outstanding electrical insulation, mechanical strength, and flexibility of PET film. An ideal material for electromagnetic shielding (EMI) and signal transmission.

Main Function: Used as EMI shielding layer for cables, wrapping shielding for sensitive electronic circuits, conductor and shielding layers for flexible printed circuits (FPC), and electronic components requiring grounding and shielding.



2. Main Application Areas

Shielding Cables: High-speed data cables, coaxial cables, industrial bus cables

Harness Assemblies: Shielding wrap for automotive and equipment harnesses

Transformer Shielding Wrap: High-frequency transformers, switching power supplies

Electronic Equipment EMI Shielding: Internal EMI shielding for phones, computers, tablets, etc.

Flexible Printed Circuits (FPC): Conductor layer and shielding layer

RF Components: RF connection cables, antenna feeder shielding

3. Specifications & Physical/Mechanical Properties

Total Thickness (μm)	Cu Foil Thickness (μm)	PET Thickness (μm)	Elongation (±10%) (%)	Tensile Strength (MPa)	Basis Weight (g/m²)	Peel Strength (N/cm)
12	4	6	30	≥80	49±5	≥6.3
14	4	8	30	≥80	55±6	≥6.3
16	6	8	30	≥80	64±6	≥6.3
20	6	12	30	≥80	78±8	≥6.3
25	9	12	30	≥80	85±9	≥6.3
30	15	12	30	≥80	91±9	≥6.3
33	18	12	30	≥80	95±10	≥6.3
35	20	12	30	≥80	98±10	≥6.3
40	18	20	30	≥80	107±11	≥6.3
45	20	23	30	≥80	116±12	≥6.3
50	25	23	30	≥80	124±12	≥6.3
103	25	75	30	≥80	225±20	≥6.3

Note: Total thickness = Cu foil thickness + PET thickness. Basis weight calculated with Cu density 8.9 g/cm³ and PET density 1.4 g/cm³. Double-sided copper available; other thickness combinations customizable.

4. Electrical & Shielding Performance

Property	Specification
Surface Resistance (Ω/sq)	≤ 0.02
Volume Resistivity (Ω·cm)	≤ 1.7 × 10 ⁻⁶
EMI Shielding Effectiveness (dB)	≥ 70 (30MHz~1.5GHz)
Dielectric Strength (PET layer) (kV/mm)	≥ 100

5. General Properties

Property	Specification	Remarks
Temperature Resistance	-40°C ~ +105°C	PET-limited; short-term up to +125°C
Chemical Resistance	Good	PET resistant to most solvents and weak acids/bases
Moisture Barrier	Excellent	PET layer provides good moisture protection
Flame Retardancy	UL94 V-0	Higher flame retardancy grades customizable

Note: Copper layer requires oxidation and corrosion protection.

6. Other Characteristics

Appearance: Copper surface is bright and flat; free from pinholes, cracks, and stains. PET surface is transparent or translucent, uniform and smooth.

Color: Copper side: natural copper color. PET side: transparent (standard); blue, green, etc. customizable.

Flexibility: Excellent; suitable for cables and FPC requiring dynamic bending.

Processability: Supports secondary processing such as punching, bending, and soldering.

Lamination Bond: Strong bond between copper foil and PET layers; no delamination.

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 2 mm, tol. ±0.1 mm

Standard Length: 1000 m ~ 4000 m/roll (customizable)

Identification: Product name, specification (Cu thickness + PET + total thickness), color, width, length, batch no., production date, manufacturer information

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Hot-Melt Copper Foil Mylar Tape

1. Product Overview

Product Name: Hot-Melt Copper Foil Mylar Tape (Single-Sided Hot-Melt Copper-Plastic Composite Tape)

Material Structure: Copper foil (Cu) + Polyester film (PET) + Hot-melt adhesive (EAA)

Structure: Three-layer composite (PET/Cu/EAA or Cu/PET/EAA); adhesive layer on copper side or PET side

Description: A three-layer hot-melt copper-plastic composite tape made from high-purity copper foil and polyester film (PET) via precision lamination, then coated with a hot-melt adhesive layer (EAA) on the copper or PET side. Combines the excellent EMI shielding (superior to aluminum foil), conductivity, and moisture barrier of copper foil with the good mechanical strength, electrical insulation, and flexibility of PET film. The hot-melt adhesive layer provides excellent heat-sealing performance, forming strong bonds with PE, PP, and HFPO sheath materials under heat, creating an integrated composite sheath.

Main Function: Used as EMI shielding layer, moisture barrier, and integrated sheath for communication cables, data cables, and RF cables. Provides reliable shielding, moisture protection, and mechanical protection for cable cores, and forms an integrated structure with the sheath through heat sealing.



2. Main Application Areas

Communication Cables / Optical Cables: High-efficiency shielding and moisture barrier for local communication cables, office cables, and optical cables

Data Cables: Shielding and sheath bonding for USB, HDMI, network data cables, and other high-frequency transmission cables

RF Cables: Shielding layer for coaxial cables and microwave cables

Power Cables: Shielding and integrated sheath for control cables and instrument cables

Electronic Equipment: Shielding wrapping for electronic components, FPC reinforcement, EMC shielding materials

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5
Total Thickness	μm	16	18	20	25	28
Copper Foil Thickness	μm	4	4	6	6	9
PET Thickness	μm	6	8	8	12	12
Hot-Melt Adhesive Thickness	μm	3	3	3	4	4
Tensile Strength	MPa	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50
Elongation at Break	%	≥ 15	≥ 15	≥ 15	≥ 15	≥ 15
Peel Strength (interlayer)	N/cm	≥ 1.0	≥ 1.0	≥ 1.0	≥ 1.0	≥ 1.0
Heat-Seal Strength	N/cm	≥ 17.5	≥ 17.5	≥ 17.5	≥ 17.5	≥ 17.5

Note 1: Copper foil thickness customizable (common 4–25 μm); PET thickness 6–25 μm; hot-melt adhesive thickness 3–15 μm.

Note 2: Tensile strength and elongation at break are tested on the composite tape as a whole.

Note 3: Heat-seal strength is tested with PE sheath material.

4. Electrical & Shielding Performance

Property	Unit	Specification	Remarks
Surface Resistance (copper side)	Ω/sq	≤ 0.02	Excellent conductivity
Volume Resistivity	Ω·cm	≤ 1.7 × 10 ⁻⁶	Pure copper conductivity
EMI Shielding Effectiveness	dB	≥ 80 (30 MHz–1 GHz)	Superior to aluminum foil Mylar
Dielectric Strength (PET layer)	kV/mm	≥ 100	—

5. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +105°C	Limited by adhesive layer
Short-Term Temperature Resistance	230°C	Withstands extrusion process
Melting Point (EAA adhesive)	≈ 100–120°C	—
Chemical Resistance	Good	Resistant to most solvents, oils, weak acids and bases
Moisture Barrier	Excellent	Copper foil provides 100% water vapor barrier
Flame Retardancy	UL94 VTM-0	Higher flame retardancy grades customizable

6. Other Characteristics

Appearance and Color: PET side customizable in blue, green, transparent, etc.; neat edges, no burrs.

Copper Foil Side: Smooth, flat, copper-red metallic luster; free from pinholes, cracks, and stains.

PET Side: Transparent or translucent, uniform and smooth.

Hot-Melt Adhesive Side: Flat and uniform; free from bubbles and missed coating.

Adhesive Characteristics: Uniform hot-melt adhesive coating; stable melt index; high bond strength with polyolefin sheath materials; peel strength after heat sealing ≥17.5 N/cm.

Processability: Suitable for wrapping and longitudinal covering; usable on high-speed cabling machines; heat-sealing temperature range: 120–160°C (adjustable by adhesive type).

Customizable Options:

Copper Foil Thickness: 4 μm, 6 μm, 9 μm, 12 μm, 18 μm, 25 μm, etc.

PET Thickness: 6 μm, 8 μm, 10 μm, 12 μm, 15 μm, 25 μm, etc.

Hot-Melt Adhesive Thickness: 3 μm, 4 μm, 6 μm, 8 μm, 10 μm, 12 μm, 15 μm, etc.

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm, 52 ± 1 mm, or 30 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 2 mm, tol. ±0.1 mm

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Copper-Plated Mylar Tape

1. Product Overview

Product Name: Copper-Plated Mylar Tape (Single-Sided Copper-Plated Polyester Film)

Material Structure: Polyester film (PET) substrate + electroplated copper layer

Structure: Two-layer (PET/Cu)

Description: Made with premium polyester film (PET) as the substrate, with a high-purity copper layer deposited on the surface via electroplating. Combines PET film's mechanical strength, electrical insulation, and flexibility with the copper layer's excellent conductivity and EMI shielding. The copper layer is smooth and flat with strong adhesion and stable conductivity.

An ideal material for EMI shielding.

Main Function: Used as EMI shielding layer, anti-static layer, and grounding layer for communication cables, data cables, and electronic equipment. Effectively suppresses electromagnetic interference and protects signal transmission quality.



2. Main Application Areas

Communication Cables / Optical Cables: Shielding layer for high-frequency data cables, network cables, and coaxial cables

Electronic Equipment: Internal EMI shielding for smartphones, laptops, tablets, etc.

Flexible Printed Circuits: EMI shielding layer for FPC

Medical Equipment: Medical electronic equipment requiring EMC

Automotive Electronics: Shielding protection for in-vehicle infotainment systems and ADAS

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7	Spec 8	Spec 9	Spec 10
Total Thickness, ± 0.05	μm	2.4	2.6	3	3.2	3.4	3.8	4.1	4.1	4.3	5
PET Substrate Thickness	μm	2.3	2.3	2.3	3.1	3.1	3.1	3.1	4	4	4
Cu Plating Thickness	μm	0.1	0.3	0.7	0.1	0.3	0.7	1	0.1	0.3	1
Basis Weight, $\pm 10\%$	g/m^2	4.1	4.8	7.3	5.3	6	8.5	11	6.7	7.4	12.9
Surface Resistance	$\text{m}\Omega$	250 ± 40	$70 \sim 80$	$40 \sim 50$	250 ± 40	$70 \sim 80$	$40 \sim 50$	$20 \sim 30$	250 ± 40	$70 \sim 80$	$20 \sim 30$
Shielding Effectiveness	dB	$50 \sim 53$	$60 \sim 64$	$65 \sim 70$	$50 \sim 53$	$60 \sim 64$	$65 \sim 70$	$72 \sim 80$	$50 \sim 53$	$60 \sim 64$	$72 \sim 80$
Tensile Strength	Mpa	≥ 150									
Elongation at Break	%	$\geq 50\%$									

4. Electrical Performance

Property	Specification
Surface Resistance	$20 \sim 250 \text{ m}\Omega$ (decreases with increasing plating thickness)
Volume Resistivity	$\leq 1.7 \times 10^{-6} \Omega\text{-cm}$
Shielding Effectiveness	$50 \sim 80 \text{ dB}$ (300–1500 MHz; increases with plating thickness)
Dielectric Strength (PET layer)	$\geq 100 \text{ kV/mm}$

5. General Properties

Property	Specification	Remarks
Temperature Resistance	$-40^\circ\text{C} \sim +150^\circ\text{C}$	Long-term service temperature
Chemical Resistance	Good	Resistant to most solvents, oils, weak acids, and weak bases
Moisture Resistance	Excellent	PET layer provides good moisture protection
Flame Retardancy	Customizable UL94 VTM-0	—

Note: Surface can be customized with nickel or tin protective plating to enhance oxidation resistance.

6. Other Characteristics

Appearance: Smooth and flat surface; free from bumps, wrinkles, indentations, and impact marks; uniform color; no oxidation black spots, corrosion, or oil stains; neat cut edges; no cracks or creases; uniform plating; no missed plating or peeling.

Copper Layer Characteristics: High-purity electrolytic copper; excellent conductivity; dense plating; strong adhesion (no peeling under 3M tape test).

Processing Performance: Supports slitting, punching, and die-cutting; suitable for wrapping and laminating; can be adhesive-backed (conductive or insulating adhesive) to make shielding tape.

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: $76 \pm 1 \text{ mm}$, $52 \pm 1 \text{ mm}$, or $30 \pm 1 \text{ mm}$ (customizable); Max. OD: $\leq 600 \text{ mm}$

Tape Width: Slittable per customer requirements; min. width 1.5 mm , tol. $\pm 0.1 \text{ mm}$

Identification: Product name, spec (PET thickness + Cu plating thickness), color, width, length, batch no., production date, manufacturer information

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Cable Aluminum Tape

1. Product Overview

Product Name: Cable Aluminum Tape (Aluminum Tape for Cable Shielding / Aluminum Alloy Tape)

Material: Industrial pure aluminum (e.g., 1145, 1060) or aluminum alloy

Temper: O temper (annealed)

Description: Made from premium aluminum and aluminum alloy materials via precision rolling. Offers excellent conductivity, EMI shielding effectiveness, moisture resistance, and mechanical strength. The surface is smooth and flat, with uniform thickness and neat edges. Suitable for EMI shielding layers, moisture barriers, and armoring layers of wires and cables. As part of the "substituting copper with aluminum" strategy, it significantly reduces cable manufacturing costs while maintaining shielding performance.

Main Function: Used as EMI shielding layer, moisture barrier, integrated sheath, and armoring protective layer for power cables, communication cables, and optical cables. Provides reliable shielding, moisture protection, and mechanical protection for cable cores.



2. Main Application Areas

Power Cables: Metallic shielding layer and armoring layer for MV/LV power cables

Control Cables: Shielding and protective layer for instrument control cables

XLPE Cables: Shielding layer for XLPE-insulated power cables

Specialty Cables: Shielding layer for RF cables and coaxial cables

Communication Cables / Optical Cables: Shielding and moisture barrier for local communication cables, office cables, and optical cables

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5
Nominal Thickness	mm	0.15	0.2	0.25	0.3	0.5
Thickness Tolerance	mm	±0.015	±0.020	±0.025	±0.030	±0.050
Width Range	mm	15 ~ 500 ± 0.5 (slittable per customer requirements)				
Tensile Strength	MPa	≥ 80	≥ 80	≥ 80	≥ 80	≥ 80
Elongation at Break	%	≥ 15	≥ 15	≥ 15	≥ 15	≥ 15

Note: Thickness tolerance refers to GB/T 3880.3 for general industrial aluminum and aluminum alloy plates, sheets, and strips — dimensional deviation standard.

4. Electrical Performance

Property	Unit	Specification	Test Standard Reference
Volume Resistivity	Ω·cm	≤ 2.8 × 10 ⁻⁶	GB/T 3048.2
Surface Resistance	Ω/sq	≤ 0.1	—
EMI Shielding Effectiveness	dB	≥ 70 (1–100 MHz)	—

5. General Properties

Property	Specification	Remarks
Corrosion Resistance	Good	Can be improved by alloying or surface treatment
Temperature Resistance	-40°C ~ +150°C	Long-term service temperature
Moisture Barrier	Excellent	100% water vapor barrier

6. Other Characteristics

Appearance: Smooth and flat surface; free from cracks, wrinkles, oil stains, scratches, and oxidation spots; neat edges; no burrs or edge cracks.

Alloy Selection:

1145 Aluminum Alloy: Suitable for cable shielding aluminum tape

1060 Pure Aluminum: Industrial pure aluminum; excellent conductivity

Aluminum Alloy Tape: Higher-strength alloy grades available (e.g., 3003, 5052) for armoring or special requirements

Temper: O temper (annealed); good flexibility; suitable for wrapping.

Winding Requirements: Tight and neat winding; flat end faces; no loose or collapsed coils. Each coil shall consist of continuous aluminum tape of the same grade and specification.

7. Packaging & Storage

Packaging: Roll form, lined with moisture-proof paper or plastic bag, outer wrapped with woven fabric or carton

Core ID: 200 ± 1 mm or 152 ± 1 mm (customizable)

Tape Width: Slittable per customer requirements; min. width 15 mm, tol. ±0.5 mm

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information

Storage: Cool, dry, clean warehouse; avoid direct sunlight, moisture, and contact with acids, alkalis, and other corrosive chemicals

Shelf Life: 12 months from production date under specified storage conditions

Galvanized Steel Tape

1. Product Overview

Product Name: Galvanized Steel Tape (Galvanized Steel Tape for Cable Armoring)

Material: Carbon structural steel, low-alloy steel

Galvanizing Process: Electro-galvanizing / Hot-dip galvanizing

Condition: Annealed then galvanized

Description: Made from premium carbon structural steel or low-alloy steel as the substrate, precision rolled, then uniformly and densely galvanized via electro-galvanizing or hot-dip galvanizing. Combines the excellent mechanical strength and tensile performance of steel tape with the good corrosion resistance and oxidation resistance of the zinc coating. An ideal material for cable armoring layers, providing reliable mechanical protection and compression cushioning for cable cores.

Main Function: Used as armoring layers for power cables, communication cables, and control cables. Provides mechanical protection, compression cushioning, and resistance to rodents and ants for cable cores.

2. Main Application Areas

Power Cables: Steel tape armoring layer for MV/LV power cables

Control Cables: Armoring protective layer for instrument control cables

Communication Cables: Armoring layer for local communication cables and optical cables

Submarine Cables: Composite armoring layer for marine engineering cables

Mining Cables: Armoring protection for cables in coal mines and other specialty environments



3. Specifications & Physical/Mechanical Properties

Nominal Thickness (mm)	Thickness Tolerance (mm)	Tensile Strength (MPa)	Elongation After Fracture (%)
0.15	±0.02	≥ 295	≥ 17
0.2	±0.02	≥ 295	≥ 17
0.25	±0.03	≥ 295	≥ 20
0.3	±0.03	≥ 295	≥ 20
0.4	±0.04	≥ 295	≥ 20
0.5	±0.05	≥ 295	≥ 20

Width Range: 15 ~ 60 mm (slittable per customer requirements)

Width Tolerance: ±0.5 mm

Note: Mechanical property requirements refer to the industry standard for steel tape used in armored cables. Elongation ≥17% for thickness ≤0.20 mm; elongation ≥20% for thickness >0.20 mm.

4. Plating Properties

Property	Unit	Electro-Galvanized Steel Tape	Hot-Dip Galvanized Steel Tape
Zinc Coating Weight (both sides)	g/m ²	≥ 40	≥ 80
Zinc Coating Thickness (single side)	μm	≥ 3	≥ 6
Zinc Coating Uniformity	—	Copper sulfate solution test: no copper deposition after 60 s immersion	
Zinc Coating Adhesion	—	Longitudinal specimen 180° bend test with mandrel diameter equal to steel tape thickness; no flaking or peeling of zinc coating at the bend	

5. General Properties

Property	Specification	Remarks
Substrate Material	Carbon structural steel, low-alloy steel	Grades conform to relevant standards
Zinc Ingot Purity (electro-galvanizing)	Zn ≥ 99.99%	Conforms to No. 1 zinc per GB/T 470
Corrosion Resistance	Good	Neutral salt spray test ≥ 240 h
Temperature Resistance	-40°C ~ +200°C	Long-term service temperature

6. Other Characteristics

Appearance: Zinc coating on steel tape surface shall be uniform and complete; free from peeling, cracks, rust, and missed plating. Rust is not permitted. Individual depressions, bumps, dents, longitudinal scratches, and marks not exceeding half of the thickness tolerance are allowed.

Edge Requirements: No edge cracks or uneven cutting allowed; burrs not exceeding half of the thickness tolerance are allowed.

Joint Requirements: Tensile strength at joints shall be no less than 300 MPa (based on original steel tape cross-section). Joints shall be free from perforations, slag, sharp points, and misalignment; no exposed metal.

Winding Requirements: Tight and neat winding; flat end faces; no loose or collapsed coils. Defective portions shall not exceed 8% of the total length per coil.

7. Packaging & Storage

Packaging: Roll form, lined with moisture-proof paper or plastic bag, outer wrapped with woven fabric or carton

Core ID: 200 ± 1 mm or 152 ± 1 mm (customizable)

Tape Width: Slittable per customer requirements; min. width 15 mm, tol. ±0.5 mm

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information

Storage: Cool, dry, clean warehouse; avoid direct sunlight, moisture, and contact with acids, alkalis, and other corrosive chemicals

Shelf Life: 12 months from production date under specified storage conditions

Silver-plated Copper Strip

1. Product Overview

Product Name: Silver-plated Copper Strip / Silver-plated Flat Copper Strip

Substrate: Oxygen-free copper wire or low-oxygen copper wire

Process: Silver plating on copper strip + precision rolling + annealing

Description: A flat conductor material made by concentrically plating a silver layer on high-purity copper strip, followed by precision rolling. It combines the high conductivity of copper with the excellent surface properties of silver. Features excellent conductivity, good high-frequency performance, high-temperature resistance, corrosion resistance, and bright surface. The silver layer is continuous and firmly adhered to the copper strip surface. After testing, the surface does not darken and has no silver particles, burrs, or mechanical damage.

Main Function: Used as conductor material for wires and cables requiring high conductivity, high-frequency signal transmission, and high-temperature resistance. Reduces conductor internal resistance and resistivity, avoids overcurrent heating and contact sparking, ensures accurate signal transmission, and improves equipment reliability.



2. Main Application Areas

Aerospace: Aviation wires, spacecraft internal connection wires, high-temperature cables

Micro Cables: Internal connection wires for precision instruments and medical devices

Military Equipment: Military electronic equipment, radar systems, missile guidance systems

High-Temperature Cables: High-temperature cables with operating temperatures above 200°C

High-Frequency Electronics: High-frequency signal transmission lines, RF cables, communication equipment internal wires

Industrial Robots: Conductor material for robot cables and drag chain cables

3. Specifications

Product Model Size	Width (mm)	Width Tolerance (±mm)	Thickness (mm)	Thickness Tolerance (±mm)	Silver Layer Thickness (μm)	Elongation (%)
0.04 × 1.0	1	±0.015	0.04	±0.005	≥2	≥25
0.05 × 1.2	1.2	±0.015	0.05	±0.005	≥2	≥25
0.05 × 1.5	1.5	±0.015	0.05	±0.005	≥2	≥25
0.05 × 2.0	2	±0.02	0.05	±0.005	≥2	≥25
0.05 × 2.5	2.5	±0.02	0.05	±0.005	≥2	≥25
0.08 × 3.0	3	±0.025	0.08	±0.005	≥2	≥25
0.05 × 3.5	3.5	±0.025	0.05	±0.005	≥2	≥25
0.06 × 3.5	3.5	±0.025	0.06	±0.005	≥2	≥25
0.06 × 4.5	4.5	±0.025	0.06	±0.005	≥2	≥25
0.08 × 4.5	4.5	±0.025	0.08	±0.005	≥2	≥25
0.10 × 4.0	4	±0.025	0.1	±0.005	≥2	≥25
0.10 × 4.5	4.5	±0.025	0.1	±0.005	≥2	≥25

Note: Other specifications: width 0.3–4.5 mm; thickness 0.028–0.3 mm; dimensions customizable.

4. Electrical Performance

Property	Unit	Specification	Remarks
Volume Resistivity (20°C)	Ω·cm	$\leq 1.72 \times 10^{-6}$	Meets pure copper conductivity standard
Conductor DC Resistance	Ω/km	Calculated by cross-sectional area	Specific values provided per specification
High-Frequency Performance	—	Superior to pure copper conductor	Silver layer advantage is significant under skin effect

5. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-60°C ~ +200°C	—
Short-Term Temperature Resistance	250°C	Some high-temperature applications can reach 250°C
Corrosion Resistance	Excellent	Silver layer has very high corrosion resistance
Oxidation Resistance	Good	Bright surface; not easily oxidized

6. Other Characteristics

Appearance: Smooth and continuous surface with silver-white metallic luster. No silver particles, burrs, or mechanical damage. Neat edges; no burrs or edge cracks.

Plating Properties: Silver layer is continuous and uniform; no missed plating, peeling, or blistering. Silver layer has good adhesion; no flaking or cracking after winding test. Easy to solder with good wetting.

7. Packaging & Storage

Packaging: Roll or spool form, lined with moisture-proof paper or plastic bag, fixed with carton or wooden spool.

Spool Specifications:

Small spool: customized according to product specification and weight

Large spool: suitable for large-volume continuous production

Core ID: 22 ± 1 mm

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information

Storage: Cool, dry, clean warehouse; avoid direct sunlight, moisture, and contact with acids, alkalis, and other corrosive chemicals

Shelf Life: 12 months from production date under specified storage conditions

Aluminum Foil Mylar Adhesive Tape

1. Product Overview

Product Name: Aluminum Foil Mylar Adhesive Tape

Material Structure: Aluminum foil (Al) + Polyester film (PET) + Pressure-sensitive adhesive (PSA)

Structure: Three-layer composite: PET / AL / Adhesive or AL / PET / Adhesive

Adhesive Type: Conductive PSA / Non-conductive PSA

Description: A functional adhesive tape made with high-purity aluminum foil and polyester film (PET) as the composite substrate, then coated with a pressure-sensitive adhesive on the aluminum foil side or PET side. It combines the excellent EMI shielding, moisture barrier, and conductivity of aluminum foil with the good mechanical strength, electrical insulation, and flexibility of PET film. The PSA layer provides instant application, strong adhesion, and easy die-cutting.

Main Function: Used for EMI shielding, ESD protection, grounding connection, and insulation wrapping of wires, cables, and electronic equipment. Provides reliable shielding protection for sensitive components and signal lines.



2. Main Application Areas

Wires & Cables: Shielding wrap and grounding for communication cables, data cables, coaxial cables, and computer peripheral cables

Electronic Equipment: Internal EMI shielding for laptops, mobile phones, tablets, LCD monitors, etc.

Transformers & Motors: Transformer winding shielding, motor internal insulation and grounding

Precision Electronics: Electromagnetic protection for PCB boards and flexible printed circuits (FPC)

Die-Cutting: Can be punched into various shapes for electronic component fixing and shielding

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4
Total Thickness	mm	0.055 ± 0.005	0.065 ± 0.005	0.085 ± 0.008	0.105 ± 0.010
Aluminum Foil Thickness	μm	7	9	12	15
PET Thickness	μm	12	12	15	25
Adhesive Thickness	μm	15	18	20	25
Standard Length	m/roll	50	50	50	50
Tensile Strength	MPa	≥ 50	≥ 50	≥ 50	≥ 50
Elongation at Break	%	≥ 15	≥ 15	≥ 15	≥ 15
Adhesion (to Steel)	N/25mm	≥ 6.0	≥ 6.5	≥ 7.0	≥ 7.5
Holding Power	h	≥ 24	≥ 24	≥ 24	≥ 24

4. Electrical Performance

Property	Unit	Conductive Type	Non-Conductive Type	Test Standard Reference
Surface Resistance (Al side)	Ω/sq	≤ 0.1	≤ 0.1	GB/T 1410
Surface Resistance (Adhesive side)	Ω/sq	≤ 0.5	≥ 1 × 10 ¹²	GB/T 1410
Volume Resistivity (Adhesive layer)	Ω-cm	≤ 1 × 10 ⁻³	≥ 1 × 10 ¹⁴	GB/T 1410
EMI Shielding Effectiveness	dB	≥ 70 (30MHz-1GHz)	≥ 70 (30MHz-1GHz)	ASTM D4935
Dielectric Strength (PET layer)	kV/mm	≥ 100	≥ 100	GB/T 1408.1

5. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +105°C	—
Short-Term Temperature Resistance	120°C	—
Chemical Resistance	Good	Resistant to most weak acids, weak bases, oils, and solvents
Moisture Barrier	Excellent	Aluminum foil layer provides 100% water vapor barrier
Flame Retardancy	UL94 VTM-0	Higher flame retardancy grades customizable

6. Other Characteristics

Appearance: Aluminum foil side is smooth and flat; free from pinholes, cracks, and stains. PET side is transparent or translucent, uniform and smooth. Adhesive layer is uniform; free from bubbles and missed coating. Neat edges; no burrs.

Color Options: Natural aluminum (silver); PET side customizable in blue, green, transparent, red, etc.

Adhesive Characteristics:

Conductive Type: Conductive particles added to adhesive layer for Z-axis conductivity; suitable for grounding and EMI shielding

Non-Conductive Type: Insulating adhesive layer; suitable for shielding applications requiring insulation protection

Initial tack is moderate for easy positioning; holding power is strong for long-term use without falling off

Release Liner: Covered with release film or release paper to protect the adhesive surface and facilitate die-cutting.

Die-Cuttable: Uniform material; suitable for precision die-cutting and punching into various complex shapes.

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed in carton

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable)

Maximum Length: ≤ 50 m

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.1 mm

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information

Storage: Cool, dry, clean warehouse; avoid direct sunlight and heat sources

Shelf Life: 12 months from production date under recommended storage conditions

PET Polyester Tape

1. Product Overview

Product Name: PET Polyester Tape / Mylar Tape

Material: Polyethylene terephthalate (PET)

Process: Biaxially oriented or cast film process

Description: Made from premium polyester chips via precision process. Offers excellent mechanical strength, electrical insulation, dimensional stability, and heat resistance. The surface is smooth and flat, with uniform thickness and good flexibility. Suitable for wrapping insulation, binding isolation, and gasket protection of various wires and cables.

Main Function: Used for wrapping insulation layers, core binding, isolation layers, and gasket protection of wires and cables, as well as insulation wrapping of electronic components.



2. Main Application Areas

Communication Cables: Wrapping insulation for data cables and RF cables

Power Cables: Isolation layer for control cables and instrument cables

Specialty Cables: Structural layers for cables requiring high-temperature and high-voltage resistance

Electronic Equipment: Interlayer insulation for transformers and inductors

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7
Nominal Thickness	μm	12	15	25	38	50	75	100
Thickness Tolerance	μm	±1	±1	±2	±3	±4	±5	±6
Basis Weight	g/m ²	16.6±2	20.7±2	34.5±3	52.4±5	69.0±7	103.5±10	138.0±14
MD Tensile Strength	MPa	≥ 60	≥ 60	≥ 60	≥ 60	≥ 60	≥ 60	≥ 60
MD Elongation at Break	%	≥ 80	≥ 80	≥ 80	≥ 80	≥ 80	≥ 80	≥ 80
Thermal Shrinkage (150°C, 30 min)	%	≤ 2.00	≤ 2.00	≤ 2.00	≤ 2.00	≤ 2.00	≤ 2.00	≤ 2.00

4. Electrical Performance

Property	Unit	Specification
Dielectric Strength	kV/mm	≥ 150
Volume Resistivity	Ω·cm	≥ 1 × 10 ¹⁵
Surface Resistivity	Ω	≥ 1 × 10 ¹³
Relative Dielectric Constant (1MHz)	—	≤ 3.2
Dissipation Factor (1MHz)	—	≤ 0.02

5. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +120°C	Long-term service temperature
Short-Term Temperature Resistance	150°C	Short-term withstand temperature
Chemical Resistance	Good	Resistant to most weak acids, weak bases, oils, and solvents
Moisture Resistance	Low hygroscopicity	Good dimensional stability
Flame Retardancy	UL94 VTM-2	Higher flame retardancy grades customizable

6. Other Characteristics

Appearance: Smooth and flat surface; free from impurities, holes, scratches, or wrinkles.

Color: Transparent (standard); white, blue, green, red, black, etc. customizable.

Flexibility: Good; easy for wrapping and punching.

Dimensional Stability: Low thermal shrinkage; stable dimensions during processing and use.

Surface Treatment: Corona treatment, single-sided or double-sided roughening available upon request to improve adhesion or anti-slip performance.

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film.

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm.

Tape Width: Slittable per customer requirements; min. 2 mm, tol. ±0.1 mm.

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information.

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact.

Shelf Life: 12 months from production date.

Flame-Retardant PET Polyester Tape

1. Product Overview

Product Name: Flame-Retardant PET Polyester Tape

Material: Polyethylene terephthalate (PET) + eco-friendly flame retardant

Process: Biaxial orientation + flame-retardant blending modification

Description: Made from premium polyester chips with eco-friendly flame retardant masterbatch via biaxial orientation. Retains the high strength, high modulus, excellent insulation, and dimensional stability of standard PET tape, while providing superior flame retardancy. Low smoke emission, self-extinguishing upon removal from flame, and eco-friendly. An ideal material for wire and cable wrapping insulation.

Main Function: Used for wrapping insulation layers, isolation layers, and core binding of wires and cables. Especially suitable for cable structures with high flame-retardant requirements.



2. Main Application Areas

Flame-Retardant Power Cables: Wrapping insulation and isolation layers for MV/LV flame-retardant power cables

Control Cables: Core binding and isolation for instrument control cables

Communication Cables and Optical Cables: Wrapping layers for flame-retardant communication cables and optical cables

Mining Cables: Flame-retardant wrapping material for cables in coal mines and other specialty environments

Specialty Cables: Flame-retardant insulation layers for marine cables and rail transit cables

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7
Nominal Thickness	mm	0.025	0.035	0.05	0.075	0.1	0.125	0.188
Thickness Tolerance	mm	±0.003	±0.003	±0.003	±0.005	±0.005	±0.008	±0.010
Basis Weight	g/m ²	34.5±3.5	48.3±5.0	69.0±7.0	103.5±10.0	138.0±14.0	172.5±17.0	259.4±26.0
MD Tensile Strength	MPa	≥ 150	≥ 150	≥ 150	≥ 150	≥ 150	≥ 150	≥ 150
Elongation at Break	%	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50
Thermal Shrinkage	%	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2

Note: Other thicknesses (e.g., 0.15 mm, 0.20 mm) customizable upon request.

4. Flame Retardant Properties

Property	Unit	Specification	Remarks
Limiting Oxygen Index (LOI)	%	≥ 32	Excellent flame retardancy; self-extinguishing
Flame Rating	—	VTM-2	Higher grade VTM-0 customizable
Halogen Content	—	Halogen-free	Eco-friendly flame retardant
Smoke Density	—	Low smoke	Low smoke emission during combustion

5. Electrical Performance

Property	Unit	Specification
Dielectric Strength	kV/mm	≥ 150
Volume Resistivity	Ω·cm	≥ 1 × 10 ¹⁵
Surface Resistivity	Ω	≥ 1 × 10 ¹³
Relative Dielectric Constant (1MHz)	—	≤ 3.2
Dissipation Factor (1MHz)	—	≤ 0.02

6. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +120°C	Long-term service temperature
Short-Term Temperature Resistance	150°C	Short-term withstand temperature
Chemical Resistance	Good	Resistant to most weak acids, weak bases, oils, and solvents
Moisture Resistance	Low hygroscopicity	Good dimensional stability
Flame Retardancy	UL94 VTM-2	Higher grade VTM-0 customizable

7. Other Characteristics

Appearance: Transparent (standard); black, blue, red, white, etc. customizable. Smooth and flat surface; free from impurities, holes, and wrinkles.

Processing Performance: Supports slitting, winding, and wrapping; suitable for high-speed cabling machines. Corona treatment available to enhance adhesion.

8. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film.

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm.

Tape Width: Slittable per customer requirements; min. 2 mm, tol. ±0.1 mm.

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information.

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact.

Shelf Life: 12 months from production date.

Hot-Melt Mylar Tape

1. Product Overview

Product Name: Hot-Melt Mylar Tape (Hot-Melt Polyester Tape)

Material Structure: Polyester film (PET) + hot-melt adhesive layer (EAA/EVA)

Structure: Two-layer composite (PET/HM)

Description: A functional wrapping tape made with premium polyester film (PET) as the substrate, single-side coated with a high-performance hot-melt adhesive layer (EAA or EVA). It combines the excellent mechanical strength, electrical insulation, and dimensional stability of PET film with the heat-sealing and bonding performance of the hot-melt adhesive layer. Under heat, the adhesive layer forms strong bonds with PE, PP, and HFPO sheath materials, forming an integrated composite sheath.

Main Function: Used for wrapping insulation layers and integrated sheath bonding layers of communication cables, data cables, and power cables, as well as insulation fixing and sealing of electronic components.



2. Main Application Areas

Communication Cables / Optical Cables: Cable core wrapping and sheath bonding layer

Power Cables: Wrapping and integrated sheath for control cables and instrument cables

Data Cables: Insulation and sheath bonding for USB, HDMI, and other high-frequency cables

Electronic Equipment: Insulation sealing for transformers and inductors

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5
Total Thickness	μm	12	16	20	22	25
PET Substrate Thickness	μm	6	8	12	12	12
Hot-Melt Adhesive Thickness	μm	6	8	8	10	13
Tensile Strength	MPa	≥60	≥60	≥60	≥60	≥60
Elongation at Break	%	≥50	≥50	≥50	≥50	≥50
Peel Strength	N/cm	≥6	≥6	≥6	≥6	≥6
Heat-Seal Strength	N/cm	≥17.5	≥17.5	≥17.5	≥17.5	≥17.5
Thermal Shrinkage (150°C, 30 min)	%	≤2.00	≤2.00	≤2.00	≤2.00	≤2.00

Note: Other specifications: PET thickness 6–38 μm; hot-melt adhesive thickness 4–15 μm; dimensions customizable.

4. Electrical Performance

Property	Unit	Specification
Dielectric Strength	kV/mm	≥100
Volume Resistivity	Ω·cm	≥1 × 10 ¹⁵
Surface Resistivity	Ω	≥1 × 10 ¹³
Relative Dielectric Constant (1MHz)	—	≤3.2
Dissipation Factor (1MHz)	—	≤0.02

5. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +105°C	Limited by adhesive layer
Short-Term Temperature Resistance	230°C	Withstands extrusion process
Chemical Resistance	Good	Resistant to weak acids, weak bases, oils, and solvents
Moisture Resistance	Low hygroscopicity	Dimensional stability
Flame Retardancy	UL94 VTM-2	VTM-0 customizable

6. Other Characteristics

Appearance: PET side is transparent and smooth; hot-melt adhesive side is flat and uniform; free from impurities, bubbles, and scratches.

Color: Transparent (standard); PET side customizable in blue, green, red, yellow, orange, black, etc.

Flexibility: Good; suitable for high-speed wrapping.

Surface Treatment: Corona treatment or roughening treatment available upon request to enhance adhesion.

Heat-Seal Conditions: Temperature 120–160°C, pressure 0.2–0.6 MPa, time 1–3 s (adjust according to equipment and material).

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤600 mm

Tape Width: Slittable per customer requirements; min. 2 mm, tol. ±0.1 mm

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information

Storage: Cool, dry, clean warehouse; avoid direct sunlight and high temperature

Shelf Life: 12 months from production date

Cable Cotton Paper Tape

1. Product Overview

Product Name: Cable Cotton Paper Tape

Material: Premium wood pulp fiber

Process: Plain weave processing

Description: Made from premium wood pulp fiber via a special process. Offers good oil absorption, softness, air permeability, and mechanical strength. The surface is flat with uniform fiber distribution and consistent thickness. Suitable for wrapping, filling, and isolation of wires and cables. The creped type offers excellent extensibility and conformability, especially suitable for wrapping irregular surfaces.

Main Function: Used as oil-absorbing filling layer, buffer layer, and isolation layer for power cables and communication cables, as well as insulation wrapping layer for oil-impregnated paper-insulated cables.



2. Main Application Areas

Power Cables: Insulation wrapping layer for oil-impregnated paper-insulated cables

Communication Cables: Cable core filling and buffer layer

Oil-Filled Cables: Oil-absorbing filling layer for storing insulating oil

Control Cables: Core isolation and buffer protection

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4
Nominal Thickness	μm	40	50	60	80
Thickness Tolerance	μm	±5	±5	±8	±10
Basis Weight	g/m ²	28±3	35±4	42±4	55±5
MD Tensile Strength	MPa	≥45	≥45	≥45	≥45
MD Elongation	%	≥5	≥5	≥5	≥5
Oil Absorption Rate	%	≥120	≥120	≥120	≥120
Moisture Content	%	≤8	≤8	≤8	≤8

4. Electrical Performance

Property	Unit	Specification
Dielectric Strength	kV/mm	≥8 (dry state)
Volume Resistivity	Ω·cm	≥1 × 10 ¹⁰ (dry state)

5. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-30°C ~ +80°C	—
Short-Term Temperature Resistance	105°C	—
Oil Resistance	Good	Good compatibility with cable oil
Hygroscopicity	Relatively high	Store in dry environment recommended

6. Other Characteristics

Appearance: Flat surface, uniform fiber distribution; free from impurities, holes, damage, or oil stains.

Color: Natural (light yellow/white) (standard).

Flexibility: Good; easy to wrap and fill.

Oil Absorption Performance: High oil absorption rate; can store insulating oil; suitable for oil-impregnated cables.

Processing Performance: Supports slitting and winding.

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film.

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤600 mm.

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.1 mm.

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information.

Storage: Cool, dry, clean warehouse; avoid direct sunlight and moisture.

Shelf Life: 12 months from production date.

Kraft Paper Tape

1. Product Overview

Product Name: Kraft Paper Tape

Material: Premium natural wood pulp kraft paper

Description: Made from premium natural wood pulp kraft paper via precision slitting. Offers good mechanical strength, oil absorption, air permeability, and softness. The product has uniform fiber distribution, a flat surface, and consistent thickness. Suitable for wrapping, filling, and isolation of wires and cables. The creped type offers excellent extensibility and conformability, especially suitable for wrapping irregular surfaces.

2. Main Functions

Cable Wrapping Insulation: Used as the wrapping insulation layer for oil-impregnated paper-insulated cables, providing reliable electrical insulation.

Oil-Absorbing Filling: Serves as the oil-absorbing filling layer for oil-filled cables, storing insulating oil and preventing internal drying.

Buffer Protection: Acts as a buffer layer during cable cabling, absorbing mechanical stress and protecting the cable core.

Isolation Layer: Used for isolation between core wires, preventing mutual abrasion and interference.

Gasket Material: Serves as a gasket between the metallic sheath and insulation layer, preventing mechanical damage.

3. Main Application Areas

Power Cables: Insulation wrapping layer for oil-impregnated paper-insulated cables

Oil-Filled Cables: Oil-absorbing filling layer for storing insulating oil

Control Cables: Core isolation and buffer protection

Communication Cables: Cable core filling and buffer layer

Motors & Electrical Appliances: Insulation protection for electronic transformers, magnet wires, inductors, etc.

4. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7
Nominal Thickness	μm	40	50	60	80	100	120	150
Thickness Tolerance	μm	±5	±5	±6	±8	±10	±12	±15
Basis Weight	g/m ²	32±3	40±4	48±5	65±6	80±8	100±10	120±10
MD Tensile Strength	N/cm	≥18	≥22	≥26	≥32	≥38	≥45	≥55
MD Elongation	%	≥6	≥6	≥6	≥6	≥6	≥6	≥6
Oil Absorption Rate	%	≥100	≥100	≥100	≥100	≥100	≥100	≥100
Moisture Content	%	≤8	≤8	≤8	≤8	≤8	≤8	≤8

Note: Creped type can achieve higher elongation (MD ≥15%, TD ≥20%); specific parameters customizable.

5. Electrical Performance

Property	Unit	Specification
Dielectric Strength	kV/mm	≥8 (dry state)
Volume Resistivity	Ω·cm	≥1 × 10 ¹⁰ (dry state)

6. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-30°C ~ +80°C	—
Short-Term Temperature Resistance	105°C	—
Oil Resistance	Good	Good compatibility with cable oil
Hygroscopicity	Relatively high	Store in dry environment recommended

7. Other Characteristics

Appearance: Flat surface, uniform fiber distribution, natural color (yellowish brown); free from impurities, holes, damage, or oil stains.

Color: Natural (yellowish brown) or white (standard).

Flexibility: Good; easy to wrap and fill.

Crepe Characteristics (if applicable): Creped type offers good extensibility and conforms to irregular surfaces.

Oil Absorption Performance: High oil absorption rate; can store insulating oil; suitable for oil-impregnated cables.

Processing Performance: Supports slitting and winding.

8. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film.

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤600 mm.

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.1 mm.

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information.

Storage: Cool, dry, clean warehouse; avoid direct sunlight and moisture.

Shelf Life: 12 months from production date.



Aramid Paper

1. Product Overview

Product Name: Aramid Paper (Aramid Insulating Paper)

Material: Meta-aramid fiber (Aramid 1313)

Process: Wet-laid forming + hot calendaring

Description: A specialty insulating paper made from meta-aramid chopped fiber and meta-aramid fibril via wet-laid forming and hot calendaring. It offers excellent high-temperature resistance, electrical insulation, mechanical strength, and chemical stability, along with tear resistance, abrasion resistance, and flame retardancy. It does not melt or deform at high temperatures and maintains stable electrical performance under extreme temperature and humidity conditions.

Main Function: Used for slot insulation, interlayer insulation, phase insulation, ground insulation, and wrapping insulation in motors, transformers, cables, and other electrical equipment, as well as high-temperature insulation protection for electronic components.



2. Main Application Areas

Power Cables: Wrapping insulation layer, shielding insulation layer, and high-temperature cable structural layer

Motors / Generators: Slot insulation, interlayer insulation, phase insulation (e.g., EV drive motors, wind turbine generators)

Transformers / Reactors: Winding interlayer insulation, ground insulation, barrier insulation

Electronic Equipment: PCB substrate, flexible circuit insulation layer, isolation gasket for high-temperature electronic components

New Energy: Insulation components for lithium battery separators or fuel cells

Aerospace & Military: Insulation materials for aircraft and missile electrical systems

3. Specifications & Physical/Mechanical Properties

Property	Unit	0.04 mm	0.05 mm	0.08 mm	0.13 mm	0.18 mm
Thickness	mm	0.04	0.05	0.08	0.13	0.18
Basis Weight	g/m ²	35	41~44	63~65	116	176
MD Tensile Strength	N/cm	≥ 18	≥ 36	≥ 39	≥ 99	≥ 150
TD Tensile Strength	N/cm	≥ 13	≥ 13	≥ 19	≥ 39	≥ 80
MD Elongation	%	≥ 4.5	≥ 4.5	≥ 5.5	≥ 4.5	≥ 8
TD Elongation	%	≥ 3.5	≥ 3.5	≥ 4.0	≥ 3.5	≥ 7
Dielectric Strength	kV/mm	≥ 8.5	≥ 8.5	≥ 7.0	≥ 8.5	≥ 8

4. Electrical Performance

Property	Unit	Specification	Remarks
Dielectric Strength	kV/mm	18 ~ 40	Depends on product type and thickness
Volume Resistivity	Ω·cm	≥ 1 × 10 ¹⁵	—
Relative Dielectric Constant	—	2.4	—
Dissipation Factor	—	≤ 0.01	—
Withstand Voltage Level	—	Up to 17 kV	—

5. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-50°C ~ +220°C	Class N (above 200°C)
Short-Term Temperature Resistance	300°C	Does not melt or deform
Thermal Durability	Stable performance after 10 years continuous use at 200°C	—
Limiting Oxygen Index (LOI)	≥ 28%	Excellent flame retardancy
Flame Retardancy Rating	UL94 V-0	Except for 0.05 mm and 0.08 mm thicknesses
Radiation Resistance	Excellent	Resistant to β, α, and γ radiation
Chemical Resistance	Good	Resistant to acids, bases, insulating oil, and organic solvents
Moisture Resistance	Excellent	Retains 90% dielectric strength at 95% humidity

6. Other Characteristics

Appearance / Color: Off-white / ivory white. Surface is calendared, smooth, and flat, with uniform thickness. Neat edges; free from burrs and impurities.

Flexibility: Good; calendaring enhances mechanical toughness while maintaining flexibility and resilience.

Processing Performance:

Supports slitting, die-cutting, and punching

Suitable for wrapping and laminating

Can be laminated with PET, PI, PPS, PEN, and other films to make flexible composite materials

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film.

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable).

Max. OD: ≤ 600 mm.

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ± 0.1 mm.

Identification: Product name, specification (thickness × width), color, length, batch no., production date, manufacturer information.

Storage: Cool, dry, clean warehouse; avoid direct sunlight and moisture.

Shelf Life: 24 months from production date.

CPP Cable Wrapping Tape

1. Product Overview

Product Name: CPP Cable Wrapping Tape (Cast Polypropylene Wrapping Tape)

Material: Polypropylene (PP) resin

Process: Cast film process

Description: Made from premium PP resin via cast film process. Features low specific gravity, thin thickness, high strength, moderate elongation, anti-slip, moisture-proof, and non-water-absorbing. Also offers good electrical properties and certain flame retardancy. The surface is specially roughened; polymer crystallization characteristics overcome the slippage issue of PET/BOPP tapes, ensuring stable and reliable wrapping and bundling performance.

Main Function: Used for wrapping, bundling, and isolation layers of power cables, control cables, XLPE cables, mining cables, communication cables, etc. An ideal

2. Main Application Areas

Power Cables: Wrapping isolation layer for medium/low-voltage power cables

Mining Cables: Wrapping material for cables in coal mines and other specialty environments

Control Cables: Core bundling and isolation for instrument control cables

Communication Cables: Wrapping insulation and isolation for communication cables

XLPE Cables: Auxiliary wrapping layer for XLPE-insulated cables

3. Specifications & Physical/Mechanical Properties

Property	Specification			
Thickness (mm)	0.06	0.08	0.1	0.12
Thickness Tolerance (mm)	±0.008	±0.010	±0.015	±0.020
Density (g/cm ³)	≤ 0.92	≤ 0.92	≤ 0.92	≤ 0.92
MD Tensile Strength (MPa)	≥ 80	≥ 80	≥ 80	≥ 80
MD Elongation at Break (%)	≥ 30	≥ 30	≥ 30	≥ 30
Service Temperature Range (°C)	-30 ~ +100	-30 ~ +100	-30 ~ +100	-30 ~ +100

4. Electrical Performance

Property	Unit	Specification
Volume Resistivity	Ω·cm	≥ 1.0 × 10 ¹⁴
Dielectric Strength	kV/mm	≥ 140

5. General Properties

Temperature Resistance: Long-term service -30°C ~ +100°C; low thermal shrinkage at high temperature

Chemical Resistance: Good; resistant to most weak acids, weak bases, and oils

Moisture Resistance: Non-water-absorbing; excellent moisture protection

Flame Retardancy: Certain flame retardancy

6. Other Characteristics

Appearance / Color: White (standard); green, blue, red, transparent (optional)

Surface: Transparent or milky white, roughened, good anti-slip performance

Flexibility: Good; easy to wrap and bundle

Economy: Thickness is about 1/4 that of non-woven and PVC tapes; effectively reduces cable diameter, saves sheath material, and significantly lowers cable cost

Processability: Long continuous length per spool, tight winding; reduces machine downtime and labor intensity

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.1 mm

Identification: Product name, spec, color, width, length, batch no., production date, manufacturer

Storage: Cool, dry, clean warehouse; avoid direct sunlight and moisture

Shelf Life: 12 months from production date



Transparent PP Wrapping Tape

1. Product Overview

Product Name: Transparent PP Wrapping Tape (Cast Polypropylene Transparent Wrapping Tape)

Material: Polypropylene (PP) resin

Process: Cast film process (transparent-grade formula, no filler or with transparent modifier)

Description: Made from high-transparency polypropylene resin via precision cast film process. Features high transparency, good gloss, low specific gravity, thin thickness, high strength, moderate elongation, moisture resistance, and non-water-absorbing. The surface is smooth and flat with high transparency. Suitable for cable wrapping applications requiring observation of internal structure or special color identification. Also offers good electrical insulation and certain flame retardancy.



2. Main Application Areas

Power Cables: Transparent wrapping isolation layer for MV/LV power cables

Control Cables: Core binding and transparent protective layer for instrument control cables

Communication Cables: Wrapping insulation and transparent protection for communication cables

Electronic Cables: Electronic equipment connection wires requiring internal structure visualization

Specialty Cables: Cables requiring transparent observation of internal structure (e.g., test cables, demonstration cables)

3. Specifications & Physical/Mechanical Properties

Property	Unit	0.025	0.035	0.045	0.06	0.08	0.1	0.12
Nominal Thickness	mm	0.025	0.035	0.045	0.06	0.08	0.1	0.12
Thickness Tolerance	mm	±0.003	±0.004	±0.005	±0.006	±0.008	±0.010	±0.012
Basis Weight	g/m ²	22.5 ± 2.5	31.5 ± 3.5	40.5 ± 4.5	54 ± 5	72 ± 7	90 ± 9	108 ± 11
MD Tensile Strength	MPa	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45
MD Elongation at Break	%	≥ 30	≥ 30	≥ 30	≥ 30	≥ 30	≥ 30	≥ 30
Thermal Shrinkage	%	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3	≤ 3

Note 1: Basis weight calculated based on PP density 0.90 g/cm³. Formula: Basis weight (g/m²) = Thickness (mm) × 0.90 × 1000.

Note 2: Thermal shrinkage test condition: 120°C × 30 min. Other thicknesses (e.g., 0.15 mm) customizable upon request.

4. Electrical Performance

Property	Unit	Specification	Remarks
Dielectric Strength	kV/mm	≥ 140	—
Volume Resistivity	Ω·cm	≥ 1 × 10 ¹⁵	Excellent insulation performance
Surface Resistivity	Ω	≥ 1 × 10 ¹³	—
Relative Dielectric Constant (1MHz)	—	≤ 2.2	—
Dissipation Factor (1MHz)	—	≤ 0.0005	—

5. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-30°C ~ +105°C	Continuous working temperature
Short-Term Temperature Resistance	120°C	Short-term withstand
Melting Point	≈ 165°C	—

6. Other Characteristics

Appearance / Color: Colorless transparent (standard); translucent or colored customizable. Surface: smooth and flat; free from impurities, holes, and wrinkles.

Product Advantages: High transparency; lightweight; high strength; good processability; cast film process provides softness and conformable wrapping.

Processing Performance: Supports slitting, winding, and wrapping; suitable for high-speed cabling machines; corona treatment available to enhance adhesion with other materials.

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film.

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm.

Tape Width: Slittable per customer requirements; min. 2 mm, tol. ±0.1 mm.

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information.

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact.

Shelf Life: 12 months from production date.

Polypropylene Foam Tape

1. Product Overview

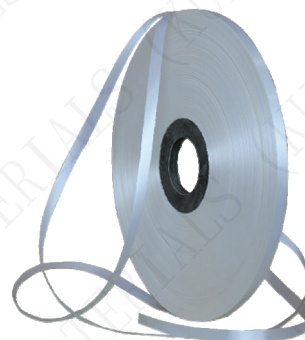
Product Name: Polypropylene Foam Tape

Material: Polypropylene (PP) resin, produced via physical/chemical foaming process

Product Models: Named by thickness, e.g., PP-F0.08, PP-F0.10, PP-F0.20, etc.

Description: A closed-cell foam tape made from PP resin via a precision-controlled foaming process. Features lightweight, soft, good resilience, low dielectric constant, and excellent cushioning and thermal insulation. The closed-cell structure ensures good moisture resistance. Ideal core filling and cabling buffer material for high-performance communication cables and data transmission cables.

Main Function: Used for cabling filling in various communication cables, data cables, and coaxial cables — rounding the cable core, cushioning protection, reducing mutual capacitance, weight reduction, and thermal insulation.



2. Main Application Areas

Communication Cables: Core pair filling for Cat.5e/6/6A/7/8 data cables, office communication cables

Coaxial Cables: Foamed insulation layer or buffer layer for RF coaxial cables (e.g., RG series)

Data Transmission Cables: High-speed data transmission cables, automotive Ethernet cables

Precision Instrument Cables: Specialty cables requiring low loss and stable phase structure

3. Specifications & Physical/Mechanical Properties

Nominal Thickness (μm)	Basis Weight (g/m^2)	MD Tensile Strength (MPa)	MD Elongation (%)	Master Roll Width (mm)
80 ± 10	34 ± 4	≥ 80	≥ 15	510 – 1020
100 ± 10	42 ± 4	≥ 80	≥ 15	510 – 1020
120 ± 10	50 ± 5	≥ 80	≥ 15	510 – 1020
140 ± 15	59 ± 6	≥ 80	≥ 15	510 – 1020
160 ± 15	67 ± 7	≥ 80	≥ 15	510 – 1020
180 ± 20	75 ± 7	≥ 80	≥ 15	510 – 1020
200 ± 20	85 ± 8	≥ 80	≥ 15	510 – 1020

4. Electrical Performance

Property	Test Standard	Specification	Remarks
Relative Dielectric Constant (ϵ_r)	GB/T 1409-2006	1.6 ~ 2.0 (Typ. @1MHz)	Low dielectric constant
Dissipation Factor ($\tan\delta$)	GB/T 1409-2006	$\leq 5.0 \times 10^{-4}$ (@1MHz)	Low loss
Volume Resistivity	GB/T 1410-2006	$\geq 1 \times 10^{14} \Omega\cdot\text{cm}$	—
Surface Resistivity	GB/T 1410-2006	$\geq 1 \times 10^{13} \Omega$	—

5. General Properties

Temperature Resistance: Long-term service $-40^\circ\text{C} \sim +85^\circ\text{C}$; short-term up to $+105^\circ\text{C}$

Moisture Resistance: Closed-cell structure provides excellent moisture resistance; non-hygroscopic

Flame Retardancy: Standard model is combustible. Flame-retardant modified versions available upon request.

6. Other Characteristics

Flexibility: Excellent; easily follows high-speed cabling equipment for tight filling

Surface Characteristics: Smooth and flat surface; moderate coefficient of friction; easy to process

Color: Standard white. Gray, black, or other colors customizable upon request.

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 2 mm, tol. ± 0.1 mm

Identification: Product name, spec, color, width, length, batch no., production date, manufacturer

Storage: Cool, dry, clean warehouse; avoid direct sunlight and moisture

Shelf Life: 12 months from production date

Thin Polypropylene Foam Tape

1. Product Overview

Product Name: Thin Polypropylene Foam Tape

Material: Polypropylene (PP) resin

Product Models: Named by thickness, e.g., PP-F0.025, PP-F0.038, etc.

Description: A closed-cell thin foam tape made from PP resin via a precision-controlled foaming process. Features lightweight, soft, good resilience, low dielectric constant, and excellent cushioning and thermal insulation. Its ultra-thin design makes it more suitable for cable structures with strict thickness requirements, especially for core filling and cushioning protection of high-frequency and high-speed data transmission cables.

Main Function: Used for cabling filling in various communication cables, data cables, and coaxial cables. Rounds the cable core, provides cushioning protection, reduces mutual capacitance, reduces weight, and provides thermal insulation.



2. Main Application Areas

Communication Cables: Core pair filling for Cat.5e/6/6A/7/8 data cables and office communication cables

Coaxial Cables: Foamed insulation layer or buffer layer for RF coaxial cables such as RG series

Data Transmission Cables: High-speed data transmission cables and automotive Ethernet cables

Precision Instrument Cables: Specialty cables requiring low loss and stable phase structure

3. Specifications and Physical and Mechanical Properties

Property	Unit	0.025	0.038	0.048	0.06	0.068
Nominal Thickness	μm	25 ± 2	38 ± 3	48 ± 5	60 ± 6	68 ± 7
Basis Weight	g/m ²	17.5 ± 2.5	26.6 ± 4.0	33.6 ± 5.0	42.0 ± 6.0	47.6 ± 7.0
MD Tensile Strength	MPa	≥ 50	≥ 50	≥ 50	≥ 50	≥ 50
MD Elongation	%	≥ 80	≥ 80	≥ 80	≥ 80	≥ 80
Width	mm	500–1000	500–1000	500–1000	500–1000	500–1000

Note: Basis weight is calculated based on density $0.70 \pm 0.05 \text{ g/cm}^3$. Theoretical formula: Basis weight (g/m²) = Thickness (μm) × Density (g/cm³).

4. Electrical Performance

Property	Specification	Remarks
Relative Dielectric Constant (ϵ_r)	1.6 ~ 2.0 (Typ. @1MHz)	Low dielectric constant
Dissipation Factor ($\tan\delta$)	$\leq 5.0 \times 10^{-4}$ (@1MHz)	Low loss
Volume Resistivity	$\geq 1 \times 10^{14} \Omega \cdot \text{cm}$	—
Surface Resistivity	$\geq 1 \times 10^{13} \Omega$	—

5. General Properties

Property	Specification	Remarks
Temperature Resistance	-40°C ~ +85°C (long-term); +105°C (short-term)	
Moisture Resistance	Excellent	Closed-cell structure; non-hygroscopic
Flame Retardancy	Standard model is combustible	Flame-retardant modified version available upon request

6. Other Characteristics

Appearance: Smooth and flat surface; uniform color; free from impurities, holes, and mechanical damage.

Color: White (standard); gray, black, or other colors customizable upon request.

Flexibility: Excellent; easily follows high-speed cabling equipment for tight filling.

Processability: Moderate surface friction; suitable for high-speed wrapping.

Thin Design Advantage: Ultra-thin design suitable for cable structures with strict thickness limits; effectively saves space.

7. Packaging and Storage

Packaging: Roll form on rigid paper core.

Core ID: $76 \pm 1 \text{ mm}$ ($52 \pm 1 \text{ mm}$ customizable); Max. OD: $\leq 600 \text{ mm}$.

Tape Width: Slittable per customer requirements; min. 2 mm, tol. $\pm 0.1 \text{ mm}$.

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information.

Storage: Recommended in a cool, dry, clean warehouse; avoid direct sunlight and high temperature.

Shelf Life: 12 months from production date.

PPD Wrapping Tape

1. Product Overview

Product Name: PPD Wrapping Tape (Embossed Polypropylene Wrapping Tape)

Material: Polypropylene (PP) resin

Process: Cast film process + optional embossing

Surface Type: Plain type; Embossed type

Description: Made from premium PP resin via precision cast film process. Available in plain type (smooth and flat surface) and embossed dot type (uniform embossed dots). The plain type offers high strength, high modulus, and good electrical insulation. The embossed dot type provides higher softness, excellent elongation at break, good resilience, and tighter wrapping.

Main Function: Used as wrapping isolation layers, buffer layers, and inner sheath wrapping materials for power cables, control cables, XLPE cables, mining cables, and communication cables. Provides reliable protection and cushioning for cable cores.



2. Main Application Areas

Power Cables: Wrapping isolation and buffer layer for MV/LV power cables

Control Cables: Core binding and isolation for instrument control cables

Mining Cables: Wrapping material for cables in coal mines and other specialty environments

XLPE Cables: Auxiliary wrapping layer for XLPE-insulated cables

Communication Cables: Wrapping isolation for communication cables

3. Specifications & Physical/Mechanical Properties

Property	Unit	0.2	0.3	0.4	0.5
Nominal Thickness	mm	0.2	0.3	0.4	0.5
Thickness Tolerance	mm	±0.03	±0.05	±0.06	±0.08
Basis Weight	g/m ²	160±16	240±24	320±32	400±40
MD Tensile Strength	MPa	≥20	≥20	≥20	≥20
Elongation at Break	%	≥120	≥120	≥120	≥120
Thermal Shrinkage (100°C, 30 min)	%	≤3.0	≤3.0	≤3.0	≤3.0

4. Electrical Performance

Property	Unit	Specification
Dielectric Strength	MV/m	≥20
Volume Resistivity	Ω·cm	≥1 × 10 ¹⁴
Dielectric Constant (1MHz)	—	≤2.2

5. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-30°C ~ +105°C	—
Short-Term Temperature Resistance	120°C	—
Chemical Resistance	Good	Resistant to most weak acids, weak bases, oils, and solvents
Moisture Resistance	Excellent	Non-water-absorbing; dimensional stability

6. Other Characteristics

Appearance: Neat edges; no burrs. Tight and flat winding; no loose or crossed tape when used vertically.

Plain Type: Smooth and flat surface; free from impurities, holes, scratches, or wrinkles.

Embossed Type: Clear, uniform embossed dots with consistent depth; free from foreign impurities.

Color: White; black; other colors customizable.

Surface Characteristics:

Plain type: smooth surface; low friction; smooth wrapping

Embossed type: uniform embossed dots; better cushioning and conformability

Process Advantages: Compared with traditional non-woven tape, embossed type offers tighter tension, tighter wrapping, flatter surface, and resistance to steel tape burr penetration.

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤600 mm

Tape Width: Slittable per customer requirements; min. 15 mm, tol. ±0.5 mm

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information

Storage: Cool, dry, clean warehouse; avoid direct sunlight; keep away from fire, heaters, and chemicals

Shelf Life: 12 months from production date

PE Wrapping Tape

1. Product Overview

Product Name: PE Wrapping Tape (Polyethylene Wrapping Tape)

Material: Polyethylene (PE) resin

Process: Extrusion cast film or blown film process

Surface Type: Plain type; Embossed type

Description: Made from premium PE resin via precision process. Offers good flexibility, electrical insulation, chemical corrosion resistance, and moisture resistance. Available in plain type (smooth and flat surface) and embossed type (patterned surface). The embossed type provides higher softness and conformability, especially suitable for tight wrapping applications.

Main Function: Used as wrapping isolation layers, core binding, gasket protection, and wrapping cushion layers during cable cabling for power cables, control cables, and communication cables.



2. Main Application Areas

Power Cables: Wrapping isolation layer and cushion layer for MV/LV power cables

Communication Cables: Wrapping insulation and isolation for communication cables

Control Cables: Core binding and isolation for instrument control cables

Mining Cables: Wrapping material for cables in specialty environments

XLPE Cables: Auxiliary wrapping layer for XLPE-insulated cables

3. Specifications & Physical/Mechanical Properties

Property	Unit	0.2	0.3	0.4	0.5
Nominal Thickness	mm	0.2	0.3	0.4	0.5
Thickness Tolerance	mm	±0.03	±0.05	±0.06	±0.08
Basis Weight	g/m ²	188±19	282±28	376±38	470±47
Tensile Strength	MPa	≥12	≥12	≥12	≥12
Elongation at Break	%	≥150	≥150	≥150	≥150

Note: Thickness tolerance refers to the PE wrapping tape industry standard; tolerance for 0.30 mm specification is ±0.05 mm.

4. Electrical Performance

Property	Unit	Specification
Dielectric Strength	MV/m	≥20
Volume Resistivity	Ω·m	≥1 × 10 ¹³
Dielectric Constant (1MHz)	—	≤2.3

5. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +70°C	—
Short-Term Temperature Resistance	90°C	—
Chemical Resistance	Good	Resistant to most weak acids, weak bases, oils, and solvents
Moisture Resistance	Excellent	Non-water-absorbing; dimensional stability

6. Other Characteristics

Appearance:

Plain type: smooth and flat surface; free from impurities, holes, scratches, or wrinkles

Embossed type: clear and uniform embossing; consistent pattern depth; free from foreign impurities

Color: Natural (translucent/milky white) (standard); black, blue, etc. customizable.

Surface Characteristics:

Plain type: smooth surface; low friction; smooth wrapping

Embossed type: patterned surface; better cushioning and conformability

Processing Performance: Supports slitting and winding; wrapping tension is easy to control.

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 15 mm, tol. ±0.5 mm

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

PVC Wrapping Tape

1. Product Overview

Product Name: PVC Wrapping Tape (PVC Cable Wrapping Tape)

Material: Polyvinyl chloride (PVC) resin + plasticizer, stabilizer, reinforcing agent

Process: Mixing and plasticizing, extrusion calendaring

Description: Made from premium PVC resin with suitable plasticizer, stabilizer, and reinforcing agent via mixing, plasticizing, extrusion calendaring, and precision slitting. Features low specific gravity, high tensile strength, good insulation, moisture resistance, and moderate elongation. The surface is specially treated for certain flame retardancy and good wrapping performance.



2. Main Application Areas

Power Cables: Inner cushion wrapping for armored cables rated 0.6/1 kV and below

Control Cables: Core binding and isolation for instrument control cables

XLPE Cables: Auxiliary wrapping layer for XLPE-insulated cables

Communication Cables: Wrapping insulation and isolation for communication cables

Mining Cables: Wrapping material for cables in coal mines and other specialty environments

3. Specifications

Property	Unit	0.08	0.1	0.12	0.30–0.35	0.40–0.60
Nominal Thickness	mm	0.08	0.1	0.12	0.30–0.35	0.40–0.60
Thickness Tolerance	mm	±0.01	±0.015	±0.02	±0.03	±0.03
Specific Gravity	g/cm ³	≤1.35	≤1.35	≤1.35	≥1.35	≥1.35

4. Physical / Mechanical Properties

Property	Unit	Thin Type (0.08–0.12 mm)	Normal Type (0.30–0.60 mm)
Tensile Strength (MD)	MPa	≥100	≥12.5
Elongation at Break	%	≥30	≥150
Impact Brittleness Temperature	°C	—	-20
Thermal Stability at 200°C	min	—	≥50

5. Electrical Performance

Property	Unit	Insulation Use	Cushion Use
Volume Resistivity (20°C)	Ω·cm	≥1×10 ¹²	≥1×10 ¹⁰
Voltage Breakdown Strength	kV/mm	≥18	≥14
Dielectric Strength (Thin Type)	kV/mm	≥20	—

Note: Reference volume resistivity for thin PVC tape (0.08–0.12 mm) is ≥1.2×10² Ω·cm.

6. General Properties

Property	Unit	Specification	Remarks
Long-Term Service Temperature	°C	-20 ~ +70	—
Storage Temperature Range	°C	-5 ~ +40	—
Flame Retardancy	—	Certain flame retardancy	Self-extinguishing
Chemical Resistance	—	Good	Resistant to weak acids, weak bases, oils
Moisture Resistance	—	Excellent	Non-water-absorbing

7. Other Characteristics

Appearance: Smooth and flat surface; uniform color; free from holes, sand holes, and wrinkles; neat edges; no cracks or burrs.

Color: Black, white, gray (standard); other colors customizable upon request.

Product Advantages:

Low Specific Gravity: Lighter per unit length than traditional wrapping tapes; does not increase overall cable weight.

High Tensile Strength: Thin type ≥100 MPa; meets high-speed wrapping requirements.

Good Anti-Slip Performance: Roughened surface prevents loosening during wrapping.

Economical: Can replace non-woven tape; reduces cable cost.

Long Winding Length: Long continuous length per spool; reduces downtime and improves efficiency.

Processing Performance: Suitable for high-speed cabling machine wrapping and longitudinal covering; tight and round winding with stable tension; smooth slitting; free from impurities and pinholes.

8. Packaging & Storage

Packaging: Roll form, fiber bag packaging; each piece approx. 30–50 kg; 3–10 pieces per bag. Carton or stretch film fixing available upon request.

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤600 mm.

Tape Width: Slittable per customer requirements; min. 10 mm, tol. ±0.5 mm.

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information.

Storage: Cool, dry, ventilated warehouse; away from fire; avoid direct sunlight; storage temperature -5 ~ +40°C.

Shelf Life: 12 months from production date.

EVA Wrapping Tape

1. Product Overview

Product Name: EVA Wrapping Tape (Ethylene-Vinyl Acetate Wrapping Tape)

Material: Ethylene-vinyl acetate (EVA) resin

Process: Extrusion cast film process

Description: Made from premium EVA resin via precision cast film process. Features good softness, excellent elasticity, low-temperature resistance, moisture resistance, and non-water-absorbing. EVA material has certain self-adhesion, providing tight interlayer bonding after wrapping and resistance to loosening. Smooth surface and uniform thickness. Suitable for wrapping, binding, filling, and cushioning protection of wires and cables.

Main Function: Used for wrapping isolation layers, core binding, and cushioning protection of power cables, control cables, and communication cables, as well as cable structural layers requiring softness and elasticity.



2. Main Application Areas

Power Cables: Wrapping isolation and cushioning layer for MV/LV power cables

Flexible Cables: Cushioning protection layer for drag chain cables and robot cables

Control Cables: Core binding and isolation for instrument control cables

Mining Cables: Wrapping material for cables in specialty environments

Communication Cables: Wrapping insulation and isolation for communication cables

3. Specifications & Physical/Mechanical Properties

Property	Unit	0.1	0.12	0.15	0.18	0.2	0.25	0.3
Nominal Thickness	mm	0.1	0.12	0.15	0.18	0.2	0.25	0.3
Thickness Tolerance	mm	±0.01	±0.015	±0.015	±0.02	±0.02	±0.025	±0.03
Basis Weight	g/m ²	95±10	114±12	143±15	171±18	190±20	238±25	285±30
MD Tensile Strength	MPa	≥12	≥12	≥12	≥12	≥12	≥12	≥12
MD Elongation at Break	%	≥200	≥200	≥200	≥200	≥200	≥200	≥200
Thermal Shrinkage	%	≤5	≤5	≤5	≤5	≤5	≤5	≤5

4. Electrical Performance

Property	Unit	Specification	Remarks
Dielectric Strength	kV/mm	≥20	—
Volume Resistivity	Ω·cm	≥1 × 10 ¹⁴	Excellent insulation performance
Surface Resistivity	Ω	≥1 × 10 ¹³	—

5. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +70°C	Continuous working temperature
Short-Term Temperature Resistance	85°C	Short-term withstand
Brittleness Temperature	≤ -60°C	Excellent low-temperature performance
Softening Point	≈ 80°C	—
Melting Point	≈ 95°C	—
Chemical Resistance	Good	Resistant to weak acids, weak bases, oils
Moisture Resistance	Excellent	Non-water-absorbing; good moisture protection

6. Other Characteristics

Appearance / Color: Natural (translucent/milky white) (standard); black, blue, red, etc. customizable.

Surface: Smooth and flat; free from impurities, holes, and wrinkles.

Advantages:

Good Softness: EVA material is soft; tight conformability after wrapping.

Excellent Elasticity: Good cushioning performance; absorbs mechanical stress.

Self-Adhesion: Certain interlayer self-adhesion after wrapping; resistant to loosening.

Low-Temperature Resistance: Brittleness temperature ≤ -60°C; maintains flexibility in low-temperature environments.

Moisture Resistance: Non-water-absorbing; excellent moisture protection.

Processing Performance: Supports slitting, winding, and wrapping; suitable for high-speed cabling machines; heat-sealable (heating required).

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film.

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm.

Tape Width: Slittable per customer requirements; min. 20 mm, tol. ±0.1 mm.

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information.

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact.

Shelf Life: 12 months from production date.

Marking Machine Ribbon

1. Product Overview

Product Name: Marking Machine Ribbon (Hot Coding Machine Ribbon)

Material: Resin-based carbon ribbon or wax-resin hybrid formulation

Structure: Two-layer coating structure

Process: Precision coating process

Description: Made from premium resin-based materials via precision coating. Features strong adhesion, clear printing, scratch and abrasion resistance, high-temperature cooking resistance, and low-temperature freezing resistance. The ink layer is uniform with stable transfer performance. Prints are clear, glossy, non-toxic, pollution-free, and environmentally compliant.

Main Function: Used for printing production dates, batch numbers, expiry dates, and necessary text markings on various flexible packaging materials. Compatible with hot coding machines, labeling machines, packaging machines, etc.



2. Main Application Areas

Wire & Cable Industry: Printing identification on cable tags, heat-shrink tubes, and sleeves; batch numbers, specifications, and meter marks on cable outer sheaths

Food Packaging Industry: Production date printing on plastic film bags and aluminum foil bags

Pharmaceutical Industry: Batch number and expiry date printing on drug outer packaging and aluminum foil blister packs

Electronics & Electrical Appliances: Printing on electronic component labels and cable identification tags

3. Specifications

Property	Unit	10	15	20	25
Width	mm	10	15	20	25
Width Tolerance	mm	±0.5	±0.5	±0.5	±0.5
Length	m/roll	100	100	100	100
Length Tolerance	m	±2	±2	±2	±2
Total Thickness	μm	22.5 ± 1.5	22.5 ± 1.5	22.5 ± 1.5	22.5 ± 1.5
Ink Layer Thickness	μm	10.5 ± 1.5	10.5 ± 1.5	10.5 ± 1.5	10.5 ± 1.5
Printing Temperature	°C	100 ~ 180	100 ~ 180	100 ~ 180	100 ~ 180

Color: Black, white, red, yellow, blue (customizable)

Compatible Media: PP, PE, PET, PVC, aluminum foil, paper, etc.

4. General Properties

Property	Specification	Remarks
Adhesion	Excellent	Clear print; not easy to peel off
Abrasion Resistance	Excellent	Scratch and wear resistant
Temperature Resistance	-20°C ~ +120°C	Resistant to high-temperature cooking and low-temperature freezing
Oil Resistance	Good	Resistant to oil smudging
Print Clarity	High	Clear, aesthetic, and glossy print

5. Other Characteristics

Appearance: Smooth and flat surface; free from wrinkles and scratches; uniform ink layer; no missed coating or particles; neat edges; no burrs.

Printing Characteristics: Suitable for hot coding devices with metal type and hot stamping machines; suitable for low-speed to high-speed coding machines; stable printing under constant temperature control; fast-drying and non-sticking.

Storage Stability: Stable performance under recommended storage conditions; avoid high-temperature and high-humidity environments that may cause ink blocking.

6. Packaging & Storage

Packaging: Roll form, lined with moisture-proof plastic bag, fixed in outer carton.

Core ID: 25.4 ± 0.1 mm (1 inch standard core); other specifications customizable.

Length per Roll: 100 m/roll (standard); other lengths customizable.

Outer Carton: 100 rolls per carton; adjustable per customer requirements.

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information.

Storage: Cool, dry, clean warehouse; avoid direct sunlight and heat sources.

Shelf Life: 24 months from production date under recommended storage conditions.

Low-Temperature Color Separation Tape

1. Product Overview

Product Name: Low-Temperature Color Separation Tape (Color Code Tape)

Material: Polypropylene (PP) resin + color masterbatch (non-fading)

Process: Cast film process

Description: Made from premium PP resin and high-concentration color masterbatch via precision cast film process. Features vivid color, moderate temperature resistance, good softness, and excellent electrical insulation. The surface is smooth and flat, with uniform thickness and clear color separation. Suitable for core color identification, binding, and isolation in cable manufacturing. Dual-color tape has clear color boundaries and uniform width for easy identification.

Main Function: Used for core color identification, binding/fixing, isolation protection, and phase marking during cabling of communication cables, local telephone cables, control cables, etc.



2. Main Application Areas

Communication Cables / Local Telephone Cables: Color-coded binding and identification of core pairs; line sequence distinction during cable splicing

Power Cables: Color separation identification of control cable cores; line sequence distinction for instrument cables

XLPE Cables: Phase identification for warm-water XLPE cables; core color separation for HV XLPE cables

Electronic Cables: Core identification for multi-core control wires; line sequence marking for instrument harnesses

3. Specifications & Physical/Mechanical Properties

Property	Unit	2	2.5	3	3.5	4	4.5	5
Width	mm	2.0±0.3	2.5±0.3	3.0±0.4	3.5±0.4	4.0±0.4	4.5±0.5	5.0±0.5
Thickness	mm	0.05	0.05	0.05	0.05	0.05	0.05	0.05
MD Tensile Strength	MPa	≥60	≥60	≥60	≥60	≥60	≥60	≥60
Elongation at Break	%	≥15	≥15	≥15	≥15	≥15	≥15	≥15
Thermal Shrinkage	%	≤10	≤10	≤10	≤10	≤10	≤10	≤10
Tensile Strength after Aging	MPa	≥48	≥48	≥48	≥48	≥48	≥48	≥48
Elongation after Aging	%	≥10	≥10	≥10	≥10	≥10	≥10	≥10
Common single colors:	Red, Yellow, Blue, Green, Black, White, Orange, Brown, Purple, Gray, etc.							

4. Chemical Properties

Property	Unit	Specification
Long-Term Service Temperature	°C	-40 ~ +120
Short-Term Temperature Resistance	°C	200 ~ 230
Instant Temperature Resistance	°C	230 ~ 250
Density	g/cm ³	0.90 ± 0.02
Oil Resistance	—	No fading or migration after petrolatum immersion
Thermal Shrinkage	%	≤10 (test temperature 230°C)

5. Electrical Performance

Property	Unit	Specification
Dielectric Strength	kV/mm	≥20
Volume Resistivity	Ω·cm	≥1 × 10 ¹⁴

6. Quality Technical Requirements

Appearance: Smooth, free from wrinkles, kinks, holes, and cracks; neat edges; free from impurities.

Dual-Color Tape: Each color width shall be no less than 1.5 mm; vivid and uniform color.

Winding: Neatly wound on core; flat and tight appearance; neat ends; no edge collapse.

Core: Split-type or longitudinally slit for easy removal from cable core.

7. Other Characteristics

Flexibility: Good; easy to wrap and bind.

Color Stability: No fading or migration after petrolatum immersion and alcohol wiping.

Processing Performance: Suitable for high-speed wrapping; easy tension control.

Compatibility: Good compatibility with cable filling compounds and insulation materials.

8. Packaging & Storage

Packaging: Plastic spool, sealed in moisture-proof plastic bag, fixed in carton.

Core ID: 25 mm; OD: 120 mm; spool height: 125 mm.

Length per Roll: 2500 ± 10% m/roll (other lengths customizable).

Carton Weight: Approx. 12–24 kg per carton.

Identification: Each roll marked with product name, model, specification (thickness × width), batch no., production date, manufacturer.

Storage: Ventilated, dry, clean warehouse; away from fire and heaters; no direct sunlight.

Shelf Life: 12 months from production date.

High-Temperature Color Separation Tape

1. Product Overview

Product Name: High-Temperature Color Separation Tape

Material: Polyester film (PET) + color masterbatch coating

Process: Biaxial orientation + color coating or co-extrusion coloring (co-extrusion: non-fading)

Description: Made from premium polyester (PET) film as the substrate via precision slitting or co-extrusion coloring. Features high temperature resistance, high mechanical strength, good dimensional stability, and vivid, long-lasting color. The surface is smooth and flat, with uniform thickness and clear color separation. Suitable for core color identification, binding, and isolation in high-temperature cable environments. Dual-color tape has clear color boundaries for easy identification.

Main Function: Used for core color identification, binding/fixing, isolation protection, and phase marking of high-temperature cables, XLPE cables, and specialty cables.



2. Main Application Areas

Communication Cables / Local Telephone Cables: Color-coded binding and identification of core pairs; line sequence distinction during cable splicing

Power Cables: Color separation identification of control cable cores; line sequence distinction for instrument cables

XLPE Cables: Phase identification for warm-water XLPE cables; core color separation for HV XLPE cables

Electronic Cables: Core identification for multi-core control wires; line sequence marking for instrument harnesses

3. Specifications & Physical/Mechanical Properties

Property	Unit	2	2.5	3	3.5	4	4.5	5
Nominal Width	mm	2	2.5	3	3.5	4	4.5	5
Width Tolerance	mm	±0.3	±0.3	±0.4	±0.4	±0.4	±0.5	±0.5
Thickness	mm	0.035	0.035	0.035	0.035	0.035	0.035	0.035
MD Tensile Strength	MPa	≥80	≥80	≥80	≥80	≥80	≥80	≥80
MD Elongation at Break	%	≥50	≥50	≥50	≥50	≥50	≥50	≥50
Thermal Shrinkage	%	≤2.0	≤2.0	≤2.0	≤2.0	≤2.0	≤2.0	≤2.0
Tensile Strength after Aging	MPa	≥60	≥60	≥60	≥60	≥60	≥60	≥60
Elongation after Aging	%	≥10	≥10	≥10	≥10	≥10	≥10	≥10

Single Colors: Red, Yellow, Blue, Green, Black, White, Orange, Brown, Purple, Gray, etc.

Dual Colors: White-Blue, White-Orange, White-Gray, White-Green, White-Brown, Red-Orange, Red-Blue, Red-Green, Black-Blue, Black-Orange, Black-Green, Yellow-Blue, Yellow-Gray, etc.

4. General Properties

Property	Unit	Specification
Long-Term Service Temperature	°C	-40 ~ +150
Instant Temperature Resistance	°C	200 ~ 230
Density	g/cm ³	1.38 ± 0.02
Oil Resistance	—	No fading or migration after petrolatum or transformer oil immersion
Chemical Resistance	—	Resistant to weak acids, weak bases, and common solvents

5. Electrical Performance

Property	Unit	Specification
Dielectric Strength	kV/mm	≥150
Volume Resistivity	Ω·cm	≥1 × 10 ¹⁵

6. Quality Technical Requirements

Appearance: Smooth, free from wrinkles, kinks, holes, and cracks; neat edges; free from impurities.

Dual-Color Tape: Each color width shall be no less than 1.5 mm; vivid and uniform color.

Winding: Neatly wound on core; flat and tight appearance; neat ends; no edge collapse or loose tape.

Core: Split-type or longitudinally slit for easy removal from cable core.

7. Other Characteristics

Flexibility: Good; easy to wrap and bind; suitable for high-speed wrapping machines.

Color Stability: Color remains vivid after long-term high-temperature aging or oil immersion; no migration or fading.

Dimensional Stability: Extremely low thermal shrinkage; stable dimensions during processing and use.

Processing Performance: Easy tension control; smooth slitting edges without burrs.

8. Packaging & Storage

Packaging: Plastic spool, sealed in moisture-proof plastic bag, fixed in carton.

Core ID: 25 mm; OD: 120 mm; spool height: 125 mm.

Length per Roll: 2500 ± 10% m/roll (other lengths customizable).

Carton Weight: Approx. 12–24 kg per carton.

Identification: Each roll marked with product name, model, specification (thickness × width), batch no., production date, manufacturer.

Storage: Ventilated, dry, clean warehouse; avoid direct sunlight; keep away from heat sources and chemicals.

Shelf Life: 24 months from production date.

Polyester Film Tape

1. Product Overview

Product Name: Polyester Film Tape / Mylar Tape

Material Structure: Polyester film (PET) substrate + flame-retardant acrylic pressure-sensitive adhesive

Structure: Single-sided tape

Description: Made from premium polyester film (PET) as the substrate, single-side coated with flame-retardant acrylic pressure-sensitive adhesive via precision coating. Offers excellent electrical insulation, high-temperature resistance, flame retardancy, and chemical resistance, along with good flexibility and conformability. The tape conforms closely to surfaces, wraps tightly, and leaves no adhesive residue after peeling. Provides effective masking protection during impregnation processes.

Main Function: Used for coil fixing and insulation wrapping of transformers, motors, capacitors, and other electronic components; gold finger protection on PCBs; lithium battery tab fixing; and wire harness bundling.



2. Main Application Areas

Transformers / Motors / Capacitors: Coil fixing, insulation wrapping, interlayer insulation

Wires & Cables: Harness bundling, cable joint insulation protection

PCB: Gold finger masking protection during plating and impregnation

Switching Power Supplies: High-voltage isolation between mainboard circuits and housing

Pouch Lithium Batteries: Tab fixing, battery edge wrapping insulation

Electronic Components: Color coding, masking protection during lead tinning

3. Specifications & Physical/Mechanical Properties

Property	Unit	0.06	0.08	0.1
Nominal Total Thickness	mm	0.06 ± 0.005	0.08 ± 0.005	0.10 ± 0.005
Substrate Thickness	mm	0.055	0.07	0.09
Adhesive Thickness	mm	0.005	0.01	0.01
Tensile Strength	N/25mm	≥ 80	≥ 80	≥ 80
Elongation at Break	%	70 ~ 100	70 ~ 100	70 ~ 100
Adhesion (to Steel)	N/25mm	≥ 6.0	≥ 6.0	≥ 6.0
180° Peel Strength	N/25mm	11 ± 2	11 ± 2	11 ± 2
Width Range	mm	5 ~ 1000 ± 0.5 (slittable per customer requirements)		
Standard Length	m/roll	33 / 50 / 66 (20~200 m customizable)		

Note: Common thicknesses are 0.055 mm and 0.08 mm. Colors customizable upon request.

4. Electrical Performance

Property	Unit	Specification	Remarks
Breakdown Voltage	kV	≥ 5.5	—
Dielectric Strength	kV/mm	≥ 100	Based on PET substrate density 1.38 g/cm ³
Insulation Resistance	Ω	≥ 1 × 10 ⁶	—
Electrolytic Corrosion Factor	—	1	No corrosion to copper conductor

Note: Breakdown voltage 5.5 kV is a reference value; actual value depends on total thickness and test conditions.

5. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-10°C ~ +130°C	Continuous working temperature
Short-Term Temperature Resistance	149°C	Short-term withstand
Flame Retardancy	UL94 V-0	Flame-retardant PSA
Chemical Resistance	Excellent	Resistant to chemicals and chemical agents
Moisture Resistance	Excellent	Waterproof and moisture-proof
Cut / Abrasion Resistance	Good	Withstands cutting and abrasion

Note: UL94 V-0 flame rating ensures safety in electronic and electrical applications.

6. Other Characteristics

Appearance: Smooth and flat surface; free from impurities and bubbles; uniform adhesive layer; no missed coating or particles; neat edges; no burrs.

Color: Multiple colors available (light yellow, dark yellow, blue, red, green, black, white, transparent, etc.).

Advantages:

High Conformability: Tight wrapping; adapts to irregular surfaces.

No Residue: Leaves no adhesive residue after peeling; suitable for clean surfaces such as PCB gold fingers.

Solvent Impregnation Resistance: Withstands plating solutions and insulating varnishes during impregnation.

Excellent Electrical Insulation: High breakdown voltage and insulation resistance.

Flame Retardant & Self-Extinguishing: UL94 V-0; self-extinguishing upon removal from flame.

Chemical Resistance: Resistant to acids, bases, chemical agents, and moisture.

Processing Performance: Supports slitting, winding, and die-cutting; suitable for high-speed automatic tape applicators; easy to tear without breaking.

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed in outer carton.

Core ID: 76 ± 1 mm (customizable).

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.1 mm.

Identification: Product name, specification, color, width, length, batch no., production date, manufacturer information.

Storage: Cool, dry, ventilated warehouse; away from fire; avoid direct sunlight; storage temperature -5 ~ +40°C.

Shelf Life: 12 months from production date.

Lightweight Cable Non-Woven Fabric

1. Product Overview

Product Name: Lightweight Cable Non-Woven Fabric (Polyester Cable Non-Woven Fabric)

Material: 100% polyester fiber (PET)

Process: Impregnation

Description: A high-performance lightweight non-woven fabric made from polyester fibers bonded with a special adhesive via impregnation. The process provides strong inter-fiber bonding, higher structural stability, and uniformity. Features light weight, uniform thickness, good flexibility, non-hygroscopicity, and chemical corrosion resistance. Its excellent mechanical properties and extremely low thermal shrinkage ensure structural stability and roundness of cables during processing and use.

Main Function: Used for core gap filling, tape buffer layers, and isolation layers in the cabling process of flexible cables, drag chain cables, power cables, communication cables, etc. Makes cables round and structurally stable, with certain thermal insulation and cushioning effects.



2. Main Application Areas

Flexible Cables / Drag Chain Cables: Core gap filling and buffer protection layers; suitable for repeatedly bent cable structures

Power Cables: Cabling filling, inner liner, isolation layer

Automotive Harnesses: Isolation and protection of automotive internal harnesses

Control Cables: Core filling and isolation for instrument control cables

Electronic & Electrical Equipment: Internal insulation and isolation layers

Communication Cables: Core filling and buffer protection for communication cables

Mining Cables: Filling and protection layers for cables in specialty environments

Optical Cables: Loose tube gap filling and cable core buffer layer

Marine Cables: Buffer protection layer for marine engineering cables

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7	Spec 8
Thickness	μm	40±4	50±5	60±6	80±8	100±10	120±12	150±15	200±20
Basis Weight	g/m ²	20±2	25±5	30±5	40±5	50±5	60±5	70±10	80±15
MD Tensile Strength	MPa	≥40	≥50	≥60	≥60	≥60	≥80	≥80	≥80
MD Elongation at Break	%	≥10	≥10	≥10	≥10	≥10	≥10	≥10	≥10

Thermal Shrinkage: ≤2.5% (Test condition: 150°C, 30 min; test method negotiable at order)

Water Absorption Speed: ≤0.1 mm/min

4. Electrical Performance

Property	Unit	Specification	Remarks
Dielectric Strength	kV/mm	≥ 10	Dry state
Volume Resistivity	Ω·cm	≥ 1 × 10 ¹³	Room temperature
Surface Resistivity	Ω	≥ 1 × 10 ¹²	Room temperature

5. General Properties

Temperature Resistance: Long-term service temperature -40°C ~ +120°C

Chemical Resistance: Resistant to most weak acids, weak bases, and oils; mildew-free

Moisture Resistance: Extremely low hygroscopicity, slow water absorption, stable performance

6. Other Characteristics

Appearance: Flat surface, uniform fiber distribution, consistent color (usually white)

Flexibility: Excellent; easy to wrap and fill

Consistency: Excellent batch-to-batch stability

Process Advantage: Impregnation process provides firmer structure and better dimensional stability

7. Packaging & Storage

Packaging: Roll form, lined with moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; tolerance ±0.1 mm

Identification: Each roll marked with product name, model, spec (thickness × width), batch no., production date, manufacturer

Storage: Recommended in a cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Lightweight Flame-Retardant Non-Woven Fabric

1. Product Overview

Product Name: Lightweight Flame-Retardant Non-Woven Fabric (Flame-Retardant Polyester Non-Woven Fabric)

Material: Polyester fiber (PET) + flame retardant (eco-friendly)

Process: Impregnation (with flame-retardant treatment)

Description: A functional non-woven material made on high-performance polyester fiber non-woven fabric, combined with an eco-friendly flame retardant via impregnation. It retains the original advantages of non-woven fabric — lightweight, flexible, uniform thickness, non-hygroscopic, and chemical corrosion resistant — while providing excellent flame retardancy. It emits low smoke during combustion and is self-extinguishing upon removal from flame, meeting eco-friendly flame-retardant requirements.



Main Function: Used for core gap filling, tape buffer layers, and isolation layers in the cabling process of flexible cables, drag chain cables, power cables, communication cables, etc. Makes cables round and structurally stable, while providing reliable flame-retardant protection.

2. Main Application Areas

Flame-Retardant Cables: Cabling filling and isolation layers for power cables, control cables, and communication cables requiring flame-retardant ratings

Flexible Cables / Drag Chain Cables: Internal buffering and isolation for robot cables and automation equipment cables

Automotive Harnesses: Isolation and protection of automotive internal harnesses

Electronic & Electrical Equipment: Internal insulation and isolation for electronic equipment in flame-retardant applications

Mining Cables: Filling and isolation materials for cables in coal mines and other specialty environments

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5
Nominal Thickness	μm	80 ± 8	100 ± 10	120 ± 12	150 ± 15	200 ± 20
Basis Weight	g/m ²	70 ± 7	80 ± 8	100 ± 10	135 ± 13	220 ± 15
MD Tensile Strength	MPa	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45
Elongation at Break	%	≥ 10	≥ 10	≥ 10	≥ 10	≥ 10
Thermal Shrinkage	%	≤ 2.5 (150°C, 30 min)				
Water Absorption Speed	mm/min	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1

Note: Thermal shrinkage test method and conditions are negotiable at order.

4. Flame Retardancy

Property	Unit	Specification	Test Standard
Limiting Oxygen Index (LOI)	%	≥ 28	GB/T 2406.2
Vertical Burning Rating	—	V-0 (UL94)	GB/T 2408
Horizontal Burning Rating	—	FH-1	GB/T 2408
Burning Dripping	—	No dripping	GB/T 2408
Smoke Density	—	Low smoke	GB/T 8323

5. Electrical Performance

Property	Unit	Specification	Remarks
Dielectric Strength	kV/mm	≥ 8	Dry state
Volume Resistivity	Ω·cm	≥ 1 × 10 ¹³	—

6. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +120°C	—
Chemical Resistance	Good	Resistant to most weak acids, weak bases, and oils; mildew-free
Moisture Resistance	Extremely low hygroscopicity	Slow water absorption; stable performance
Flame Retardant Type	Eco-friendly	Halogen-free; RoHS compliant

7. Other Characteristics

Appearance: Flat surface, uniform fiber distribution, consistent color (usually white; custom colors available)

Flexibility: Excellent; easy to wrap and fill

Consistency: Excellent batch-to-batch stability

Process Advantage: Impregnation process provides firmer structure and better dimensional stability

Flame-Retardant Characteristics: Self-extinguishing upon removal from flame; low smoke and non-toxic; meets eco-friendly flame-retardant requirements

8. Packaging & Storage

Packaging: Roll form, lined with moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.1 mm

Identification: Each roll marked with product name, model, spec (thickness × width), batch no., production date, manufacturer

Storage: Recommended in a cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Conductive Lightweight Non-Woven Fabric

1. Product Overview

Product Name: Conductive Lightweight Non-Woven Fabric (Copper/Nickel Plated)

Material Structure: Polyester (PET) non-woven substrate + surface copper/nickel electroplated metal layer

Process: Impregnation molding + precision electroplating

Description: Made with high-performance polyester non-woven as the substrate, firmly coated with a copper-nickel metal layer via advanced electroplating. Combines metal properties with fabric flexibility. Retains the original lightweight, soft, bendable, and foldable characteristics of non-woven, while providing excellent conductivity, EMI shielding effectiveness, and metallic luster. The metal layer has strong adhesion and good processability.

Main Function: Used to manufacture conductive fabric tapes, conductive foam gaskets, and other EMI shielding components. Suppresses electromagnetic interference (EMI). Especially suitable as an ultra-thin shielding material for precision electronic devices. Also used directly as cable shielding layers, anti-static layers, or flexible grounding materials.



2. Main Application Areas

Electronics (Core Application): EMI shielding, grounding, and ESD protection inside smartphones, laptops, tablets, wearable devices, etc.

Cables & Harnesses: Wrapping shielding layer or anti-static isolation layer for high-frequency data cables and shielded cables

Medical Electronics: Components requiring EMI shielding with flexibility and thinness in medical equipment

Specialty Clothing: Local functional material for anti-static workwear and electromagnetic protective clothing

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6
Thickness	μm	50±5	80±8	100±10	120±12	150±15	200±20
Basis Weight	g/m ²	40±5	65±5	80±5	95±5	115±10	200±15
MD Tensile Strength	MPa	≥45	≥45	≥45	≥45	≥45	≥45
Elongation at Break	%	≥10	≥10	≥10	≥10	≥10	≥10
Thermal Shrinkage	%	≤3 (150°C, 30 min)					

4. Electrical & Shielding Performance

Property	Specification	Remarks
Surface Resistance	< 1.0 Ω/sq (Typ. < 0.5 Ω/sq)	Ultra-low surface resistance; excellent conductivity
EMI Shielding Effectiveness	≥ 70 dB (@30MHz – 1GHz)	Superior broadband shielding performance
Static Decay Time	< 0.1 s (1000V to 100V)	Extremely fast static dissipation

5. General Properties

Temperature Resistance: Long-term service -40°C ~ +120°C; short-term withstands 150°C (may affect appearance)

Chemical Resistance: Metal layer resistant to most organic solvents; avoid strong acids, strong bases, and oxidizing environments to prevent corrosion

Moisture Resistance: Substrate has low hygroscopicity; humid environments may accelerate metal layer oxidation (nickel layer provides some protection)

Flame Retardancy: Substrate is combustible; electroplated layer is non-combustible. Overall flame retardancy is moderate; flame-retardant treatment available upon request

6. Other Characteristics

Appearance: Metallic luster (copper or nickel silver); flat and uniform surface

Flexibility: Excellent; withstands repeated bending and winding without cracking; metal layer does not powder

Consistency: Uniform electroplated layer; good batch-to-batch electrical stability

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof and anti-static bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; standard width tolerance ±0.1 mm

Identification: Each roll marked with product name, model, spec (thickness × width), batch no., production date, manufacturer

Storage: Recommended in a cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date under specified packaging and storage conditions

Plain Weave Non-Woven Fabric

1. Product Overview

Product Name: Plain Weave Non-Woven Fabric (Electrical Polyester Non-Woven Fabric, Non-Woven Paper)

Product Model: 7031 Electrical Non-Woven Fabric

Material: 100% polyester staple fiber (PET)

Process: Mechanical carding web formation + thermal calendering bonding

Description: Made from premium polyester (PET) staple fiber via mechanical carding and directional web formation, then bonded by thermal calendering. This process provides a uniform and flat surface, small thickness deviation, and orderly fiber distribution. The product offers high heat resistance, excellent impregnation, outstanding dielectric properties, and high tensile strength, with a neat appearance. An ideal electrical insulation material.

Main Function: Used as slot insulation, interlayer insulation, gasket insulation, and base material for cable wrapping tape in motors, transformers, and electrical appliances. Provides reliable electrical insulation and mechanical protection.



2. Main Application Areas

Motors & Electrical Appliances: Slot insulation for small and medium motors, interlayer insulation for transformers, electrical wire wrapping

Cable Industry: Base material for wrapping insulation or reinforcement layers of fire-resistant cables and specialty cables

Electronic Components: Insulation protection for electronic transformers, magnet wires, inductors, etc.

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7
Thickness	μm	30±3	40±5	50±5	60±5	70±6	80±10	100±10
Basis Weight	g/m ²	20±3	30±5	35±5	45±5	50±5	55±5	70±10
MD Tensile Strength	MPa	≥35	≥35	≥35	≥35	≥35	≥35	≥35
Elongation at Break	%	≥10	≥10	≥10	≥10	≥10	≥10	≥10

Thermal Shrinkage: ≤3.0% (150°C, 30 min)

4. Electrical Performance

Property	Test Standard	Specification	Remarks
Dielectric Strength	GB/T 1408.1-2016	≥35 kV/mm	Excellent dielectric properties
Volume Resistivity	GB/T 1410-2006	≥1 × 10 ¹⁵ Ω·cm	Room temperature
Surface Resistivity	GB/T 1410-2006	≥1 × 10 ¹³ Ω	Room temperature
Relative Dielectric Constant (1MHz)	GB/T 1409-2006	≤2.5	Low dielectric constant

5. General Properties

Temperature Resistance: Long-term service -40°C ~ +155°C (Class F); short-term up to 180°C

Chemical Resistance: Excellent impregnation; good compatibility with epoxy, polyester, and varnishes. Resistant to most transformer oils, greases, and weak acids/bases

Moisture Resistance: Low hygroscopicity; maintains good electrical performance in humid environments

Flame Retardancy: UL94 V-0 achievable by adding flame retardants (customized)

6. Other Characteristics

Appearance: Uniform and flat surface, consistent color (usually natural white), neat edges, no visible impurities, holes, or damage

Flexibility: Good; easy to punch, bend, and wrap

Dimensional Stability: Low thermal shrinkage; stable dimensions during processing and use

7. Packaging & Storage

Packaging: Roll form, lined with moisture-proof paper or plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; standard width tolerance ±1 mm

Identification: Each roll marked with product name, model, spec (thickness × width), batch no., production date, manufacturer

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Plain Weave Conductive Non-Woven Fabric

1. Product Overview

Product Name: Plain Weave Conductive Non-Woven Fabric (Copper-Nickel Composite Conductive Non-Woven Fabric)

Product Model: EC-7031M Conductive Shielding Fabric

Substrate: 100% polyester plain weave non-woven fabric (meets 7031 electrical non-woven standard)

Conductive Layer: Surface electroplated copper-nickel composite metal layer

Process: Mechanical carding web formation + thermal calendaring bonding + precision electroplating (Cu-Ni)

Optional Surface Treatment: Adhesive coating (conductive or non-conductive), black coating (anti-oxidation, aesthetic)

Description: Made with premium electrical polyester non-woven as the substrate, uniformly coated with a copper-nickel composite metal layer via precision electroplating. Forms a stable conductive non-woven material with strong adhesion. Combines the softness and processability of non-woven with the excellent conductivity and shielding performance of the metal layer. Suitable for various EMI shielding, anti-static, and grounding applications.

Main Function: Used to make conductive fabric tapes, die-cut parts, and foam gasket wraps. Widely used for EMI suppression, ESD protection, and grounding in electronic instruments and equipment.

2. Main Application Areas

Electronics (Core Application): EMI shielding, grounding, and ESD protection inside smartphones, laptops, tablets, wearable devices, etc.

Cables & Harnesses: Wrapping shielding layer or anti-static isolation layer for high-frequency data cables and shielded cables

Specialty Clothing: Local functional material for anti-static workwear and electromagnetic protective clothing

3. Specifications

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5
Substrate Thickness	μm	50±5	60±5	80±10	100±10	120±15
Finished Basis Weight	g/m ²	60±6	70±7	80±8	90±9	110±10
MD Tensile Strength	MPa	≥30	≥30	≥30	≥30	≥30
Elongation at Break	%	≥10	≥10	≥10	≥10	≥10
Metal Layer Thickness	—	Cu: 2–5 μm; Ni: 0.1–0.5 μm				
Thermal Shrinkage	%	≤2.0 (120 °C, 30 min)				

4. Electrical & Shielding Performance

Property	Specification	Remarks
Surface Resistance	0.05 ~ 0.5 Ω/sq	Low resistance; excellent conductivity
Shielding Effectiveness	≥ 60 dB (30 MHz ~ 1 GHz)	Suitable for medium and high frequency EMI shielding
Static Decay Time	≤ 0.1 s (50% RH)	Fast static dissipation
Metal Adhesion	≥ 4B (cross-cut test)	Strong coating adhesion

5. General Properties

Temperature Resistance: Long-term service -40°C ~ +120°C; short-term up to 150°C

Corrosion Resistance: Nickel layer provides excellent anti-oxidation and corrosion resistance; salt spray test ≥ 48 h

Chemical Resistance: Resistant to alcohol, weak acids, weak bases, and general oils; plating does not peel

Environmental Adaptability: Suitable for normal humidity and cleanroom environments; stable resistance

6. Other Characteristics

Conductive Fabric Tape: Can be made into conductive tape after adhesive backing for shielding attachment

Die-Cut Material: Can be punched into various shielding pieces, grounding pieces, and gaskets

Conductive Gasket: Can wrap foam to make conductive foam gaskets for gap shielding

Custom Lamination: Can be laminated with PET, aluminum foil, foam, etc.

7. Packaging & Storage

Packaging: Roll form, lined with anti-static bag or aluminum foil bag; outer packaging: carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Roll Width Tolerance: ±1 mm (slitting to customer-specified width supported)

Identification: Each roll marked with product name, model, spec (thickness × width), batch no., production date, manufacturer

Storage: Recommended at 10~30°C, humidity ≤70%, clean and dry environment; avoid contact with corrosive substances

Shelf Life: 12 months from production date



Plain Weave Single-Sided Conductive Non-Woven Fabric

1. Product Overview

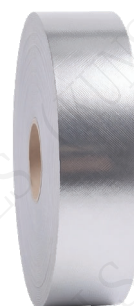
Product Name: Plain Weave Single-Sided Conductive Non-Woven Fabric

Material Structure: Polyester fiber (PET) + conductive aluminum layer (Al)

Structure: Plain weave non-woven substrate + single-sided conductive coating

Description: A functional material made with polyester fiber non-woven fabric as the substrate and a conductive layer (aluminum layer) laminated via surface coating. It offers stable conductivity, uniform surface resistance, good mechanical strength, and flexibility. The conductive layer bonds firmly to the substrate, effectively providing static dissipation and EMI shielding while maintaining the original flexibility and processability of the non-woven fabric.

Main Function: Anti-static protection, EMI shielding, and grounding connection for electronic equipment, wires and cables, precision instruments, etc. Especially suitable for packaging and processing environments of ESD-sensitive electronic components.



2. Main Application Areas

Electronic Packaging: Anti-static packaging materials for electronic components and PCB boards

Cables and Wires: Shielding layer and grounding layer for anti-static cables

Precision Instruments: Internal anti-static isolation for instruments and meters

Cleanrooms: Anti-static workbench mats and grounding mats

Semiconductor Equipment: ESD protection materials for cleanroom environments

3. Specifications

Property	Unit	50	60	70	80	100
Nominal Thickness	μm	50	60	70	80	100
Thickness Tolerance	μm	±5	±5	±6	±10	±10
Basis Weight	g/m ²	35±4	45±5	50±5	55±6	70±7
MD Breaking Strength	MPa	≥ 45	≥ 45	≥ 45	≥ 45	≥ 45
MD Elongation at Break	%	≥ 5.0	≥ 5.0	≥ 5.0	≥ 5.0	≥ 5.0
Surface Resistance	Ω	≤ 1 × 10 ⁸	≤ 1 × 10 ⁸	≤ 1 × 10 ⁸	≤ 1 × 10 ⁸	≤ 1 × 10 ⁸

Note: Thickness range 0.03–0.2 mm; 0.06 mm is commonly used; other thicknesses customizable.

4. Electrical Performance

Property	Unit	Specification	Remarks
Surface Resistance	Ω	≤ 1 × 10 ⁸	Main anti-static index; lower value gives better effect
Grounding Resistance Requirement	Ω	< 100	Conductive side must be reliably grounded during use
Static Decay Time	s	< 2.0	From 1000 V to 100 V

5. Other Characteristics

Appearance: Flat surface; no wrinkles, scratches, or holes; uniform conductive layer; no missed coating or particles; neat edges; no burrs

Color: Silver white on conductive side; natural color on back

Conductive Layer Characteristics: Single-sided conductive coating (aluminum layer); strong bond to substrate; stable surface conductivity and uniform resistance

Usage Notes:

Conductive layer must not be exposed to moisture or rain; otherwise local or large-area oxidation and peeling may occur

Anti-static effect decays over time; use within shelf life

Conductive side must be reliably grounded during use; grounding resistance should be less than 100 Ω

Avoid contact with sharp objects to prevent scratching the conductive layer

6. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.2 mm

Identification: Each roll marked with product name, model, spec (thickness × width), batch no., production date, manufacturer

Storage: Cool, dry, clean warehouse; avoid direct sunlight, moisture, and chemical contact

Shelf Life: 12 months from production date

Plain Weave Flame-Retardant Non-Woven Fabric

1. Product Overview

Product Name: Plain Weave Flame-Retardant Non-Woven Fabric (Flame-Retardant Electrical Polyester Non-Woven Fabric)

Material: 100% polyester staple fiber (PET) + eco-friendly flame retardant masterbatch

Process: Mechanical carding web formation + thermal calendaring bonding (flame retardant masterbatch blended and thermally calendared)

Description: Made from premium polyester (PET) staple fiber with eco-friendly flame retardant masterbatch, mechanically carded into a directional web, and bonded by thermal calendaring into a plain weave flame-retardant non-woven fabric. The process evenly distributes the flame retardant within the fibers, providing permanent flame retardancy while maintaining a uniform, flat surface, small thickness deviation, and orderly fiber distribution. It offers excellent flame retardancy (self-extinguishing, no dripping), good electrical insulation, and mechanical strength. Low smoke emission during combustion; meets eco-friendly flame-retardant

Main Function: Used as flame-retardant insulation layers, interlayer insulation, gasket insulation, and wrapping insulation substrate for flame-retardant cables in motors, transformers, and electrical appliances. Provides reliable electrical insulation and fire protection.



2. Main Application Areas

Flame-Retardant Cables: Wrapping insulation and isolation layers for power cables, control cables, and communication cables requiring flame-retardant ratings

Motors & Electrical Appliances: Slot insulation for small and medium motors, interlayer insulation for transformers, coil wrapping for electrical appliances (flame-retardant applications)

Electronic Components: Flame-retardant insulation protection for transformers, magnet wires, inductors, etc.

Specialty Cables: Flame-retardant wrapping layers for mining cables, marine cables, and rail transit cables

Home Appliances: Flame-retardant insulation and isolation for internal wiring of home appliances

3. Specifications & Physical/Mechanical Properties

Property	Unit	30	40	50	60	70	80	100
Nominal Thickness	μm	30	40	50	60	70	80	100
Thickness Tolerance	μm	±3	±5	±5	±5	±6	±10	±10
Basis Weight	g/m ²	22±3	32±5	38±5	48±5	55±5	65±8	85±10
MD Tensile Strength	MPa	≥45	≥45	≥45	≥45	≥45	≥45	≥45
Elongation at Break	%	≥10	≥10	≥10	≥10	≥10	≥10	≥10
Thermal Shrinkage	%	≤3.0 (150°C, 30 min)						

4. Flame Retardancy

Property	Unit	Specification	Test Standard
Limiting Oxygen Index (LOI)	%	≥28	GB/T 2406.2
Vertical Burning Rating	—	V-0 (UL94)	GB/T 2408
Horizontal Burning Rating	—	FH-1	GB/T 2408
Burning Dripping	—	No dripping	GB/T 2408
Smoke Density	—	Low smoke	GB/T 8323
Halogen Content	—	Halogen-free (Cl, Br ≤0.5%)	EN 14582

5. Electrical Performance

Property	Test Standard	Specification	Remarks
Dielectric Strength	GB/T 1408.1-2016	≥30 kV/mm	Excellent dielectric properties
Volume Resistivity	GB/T 1410-2006	≥1 × 10 ¹⁴ Ω·cm	Room temperature
Surface Resistivity	GB/T 1410-2006	≥1 × 10 ¹² Ω	Room temperature
Relative Dielectric Constant	GB/T 1409-2006	≤2.8 (1MHz)	Low dielectric constant

6. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +155°C (Class F)	—
Short-Term Temperature Resistance	180°C	—
Chemical Resistance	Excellent	Good compatibility with epoxy, polyester, and varnishes; resistant to most transformer oils, greases, and weak acids/bases
Moisture Resistance	Low hygroscopicity	Maintains good electrical performance in humid environments

7. Other Characteristics

Appearance: Uniform and flat surface; consistent color (usually natural white); neat edges; free from visible impurities, holes, or damage. Uniform flame retardant distribution; no precipitation or particles.

Flexibility: Good; easy to punch, bend, and wrap.

Dimensional Stability: Low thermal shrinkage; stable dimensions during processing and use.

Process Advantages:

Thermal Calendaring: Flame retardant masterbatch blended with fibers; flame retardant evenly distributed within fibers

Permanent Flame Retardancy: Performance does not decay with time, washing, or aging

No Precipitation: Flame retardant fixed inside fibers; no surface precipitation risk

Flame-Retardant Characteristics: Self-extinguishing, no dripping; low smoke emission; meets UL94 V-0 requirements

8. Packaging & Storage

Packaging: Roll form, lined with moisture-proof paper or plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.1 mm

Identification: Each roll marked with product name, model, spec (thickness × width), batch no., production date, manufacturer, and flame retardant grade

Storage: Recommended at 10~30°C, humidity ≤70%, clean and dry environment; avoid contact with corrosive substances

Shelf Life: 12 months from production date

Reinforced Non-Woven Fabric

1. Product Overview

Product Name: Reinforced Non-Woven Fabric (Laminated Non-Woven Fabric)

Material Structure: Polyester non-woven + polyester film (PET)

Structure: Two-layer composite (Non-woven/PET)

Description: A reinforced composite tape made with high-performance polyester non-woven as the substrate, laminated with polyester film (PET) via precision lamination. It perfectly combines the softness, cushioning, and filling properties of non-woven with the excellent mechanical strength, electrical insulation, and dimensional stability of PET film. The PET lamination significantly improves tensile strength, moisture resistance, and surface flatness, enabling the product to provide both filling/cushioning and stronger structural support and isolation protection in cable cabling processes.

Main Function: Used as reinforced filling layers, isolation layers, and buffer layers for power cables, communication cables, and control cables. Especially suitable for cable structures with higher requirements on mechanical strength and dimensional stability.



2. Main Application Areas

Communication Cables / Optical Cables: Cable core filling and mechanical protection layer

Power Cables: Cabling filling and reinforced isolation layer for MV/HV power cables

Control Cables: Core isolation and reinforced protection for instrument control cables

Mining Cables: Buffer and reinforcement layer for specialty cables in harsh environments

Automotive Harnesses: Isolation and protection of automotive internal harnesses

Flexible Cables / Drag Chain Cables: Dynamically bent cable structures requiring higher mechanical strength

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6
Total Thickness	mm	0.10 ± 0.01	0.12 ± 0.01	0.15 ± 0.015	0.18 ± 0.015	0.20 ± 0.02	0.25 ± 0.02
Non-Woven Layer Thickness	mm	0.07	0.09	0.11	0.13	0.15	0.18
PET Film Thickness	μm	12	12	15	15	25	38
Basis Weight	g/m ²	85 ± 8	100 ± 10	125 ± 12	145 ± 15	170 ± 17	210 ± 20
MD Tensile Strength	N/cm	≥ 80	≥ 90	≥ 100	≥ 110	≥ 130	≥ 150
TD Tensile Strength	N/cm	≥ 40	≥ 45	≥ 50	≥ 55	≥ 60	≥ 70
MD Elongation at Break	%	≥ 15	≥ 15	≥ 15	≥ 15	≥ 15	≥ 15
TD Elongation at Break	%	≥ 20	≥ 20	≥ 20	≥ 20	≥ 20	≥ 20
Thermal Shrinkage (150°C, 30 min)	%	≤ 2.0	≤ 2.0	≤ 2.0	≤ 2.0	≤ 2.0	≤ 2.0
Interlayer Peel Strength	N/cm	≥ 1.0	≥ 1.0	≥ 1.2	≥ 1.2	≥ 1.5	≥ 1.5

4. Electrical Performance

Property	Unit	Specification	Remarks
Dielectric Strength	kV/mm	≥ 50	PET film provides main insulation
Volume Resistivity	Ω·cm	≥ 1 × 10 ¹⁴	
Surface Resistivity	Ω	≥ 1 × 10 ¹³	

5. General Properties

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +120°C	—
Short-Term Temperature Resistance	150°C	—
Chemical Resistance	Good	Resistant to most weak acids, weak bases, oils, and solvents
Moisture Resistance	Excellent	PET film layer provides good moisture barrier
Flame Retardancy	UL94 VTM-2	Higher flame retardancy grades customizable

6. Other Characteristics

Appearance: Flat surface; PET film side smooth and transparent; free from impurities, holes, and scratches. Non-woven side has uniform fiber distribution; no visible impurities. Neat edges; no burrs. Strong interlayer bond; no delamination.

Color: PET film side: transparent (standard); blue, green, milky white customizable. Non-woven side: white (standard).

Flexibility: Good; easy to wrap and fill. PET film layer provides better dimensional stability and reduces processing deformation.

Reinforcement Advantages:

Strength Improvement: PET lamination increases tensile strength by over 50%

Enhanced Moisture Resistance: PET film layer provides better moisture barrier

Dimensional Stability: Lower thermal shrinkage; more stable dimensions during processing and use

Smooth Surface: PET film surface is smooth; reduces wrapping friction

Processing Performance: Supports slitting and winding; suitable for high-speed cabling machine wrapping

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.1 mm

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Embossed Dot Non-Woven Fabric

1. Product Overview

Product Name: Embossed Dot Non-Woven Fabric

Material: Polyester fiber + polypropylene fiber

Process: Thermal calendering + embossing

Description: Made with polyester fiber as the main body and polypropylene fiber as the binder via thermal calendering, with a uniform dotted embossed pattern on the surface. Features light specific gravity, high tensile strength, and high coefficient of friction. The embossed dot design significantly increases surface friction, preventing loosening during wrapping. Especially suitable for high-speed cabling machines.



Main Function: Used for wrapping, outer core binding, longitudinal covering, and inner cushion layers of power cables, control cables, communication cables, optical fiber cables, and rubber-sheathed cables. Provides stable structural fixing and cushioning protection.

2. Main Application Areas

Power Cables: Wrapping and binding layer for all-plastic power cables

Rubber-Sheathed Cables: Inner cushion layer for mobile rubber-sheathed flexible cables

Control Cables: Core binding and isolation for instrument control cables

High-Speed Cabling: Especially suitable for cabling machines with high wrapping speeds

Communication Cables and Optical Cables: Cable core wrapping and fixing

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4
Nominal Thickness	μm	130 ± 5	160 ± 5	200 ± 5	250 ± 5
Equivalent Thickness	mm	0.13 ± 0.02	0.16 ± 0.02	0.20 ± 0.03	0.25 ± 0.04
Basis Weight	g/m ²	70 ± 5	80 ± 5	95 ± 5	105 ± 5
Tensile Strength	N/40mm	≥ 120	≥ 150	≥ 200	≥ 250
Elongation at Break	%	≤ 15	≤ 15	≤ 20	≤ 20
Water Absorption Speed	mm/min	≤ 0.1	≤ 0.1	≤ 0.1	≤ 0.1

Note: Thickness range is 0.1–0.4 mm; 0.2 mm is commonly used; other thicknesses customizable.

4. Other Characteristics

Appearance and Color: White and grass green (standard); other colors customizable.

Surface: Uniform embossed dot pattern; uniform fiber distribution; free from visible impurities and holes; neat edges; no burrs.

Embossing Advantages:

Increased Friction: Embossed dots significantly improve surface friction; wrapping does not loosen easily

High-Speed Suitability: Especially suitable for cabling machines with high wrapping speeds

Light Specific Gravity: Lightweight material; does not increase cable weight

Processing Performance: Supports slitting and winding; suitable for high-speed wrapping machines

5. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm (customizable up to 800 mm)

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.1 mm

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Water-Blocking Tape

1. Product Overview

Product Name: Water-Blocking Tape (Insulation Water-Blocking Tape)

Material Structure: Polyester fiber non-woven substrate + water-swellaable polymer resin

Process: Impregnation / coating

Description: A functional water-blocking material made with high-performance polyester fiber non-woven as the substrate, combined with water-swellaable polymer resin via a special process. In dry state, it retains the original flexibility, mechanical strength, and processability of the non-woven. Upon contact with water, the resin rapidly absorbs water and expands to form a dense gel, effectively blocking longitudinal and radial water penetration paths inside cables. The expanded gel is stable, does not dissolve or migrate, ensuring long-term water-blocking reliability.

Main Function: Longitudinal water blocking for conductor screens, insulation screens, and metallic sheaths of power cables and communication optical cables. Prevents insulation degradation or signal attenuation caused by water ingress.



2. Main Application Areas

Power Cables: Conductor water-blocking layer and insulation screen water-blocking layer for MV/HV XLPE cables

Communication Optical Cables: Cable core water-blocking protection for stranded loose tube and central tube optical cables

Submarine Cables: Marine engineering cables with special water-blocking requirements (seawater-resistant type customizable)

Mining Cables: Longitudinal waterproofing for mining cables in wet environments

Oil Platform Cables: Specialty water-blocking cables for offshore oil and gas platforms

Note: Thickness 0.20–0.25 mm is suitable for optical cables; thickness ≥ 0.30 mm is suitable for power cables.

3. Specifications

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6
Thickness	mm	0.20±0.02	0.25±0.02	0.30±0.03	0.40±0.05	0.50±0.05	0.80±0.05
Basis Weight	g/m ²	80±10	90±10	100±10	130±10	150±20	220±20
MD Tensile Strength	N/cm	≥25	≥30	≥30	≥35	≥40	≥50
TD Tensile Strength	N/cm	≥12	≥12	≥12	≥15	≥15	≥18
Elongation at Break	%	≥12	≥12	≥12	≥12	≥12	≥12
Moisture Content	%	≤9	≤9	≤9	≤9	≤8	≤8

4. Water Resistant Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6
Expansion Speed	mm/min	≥6	≥8	≥10	≥12	≥12	≥12
Expansion Height	mm/3min	≥8	≥10	≥12	≥14	≥14	≥14
Gel Stability After Expansion	—	Stable, does not dissolve or migrate					
Expansion Retention Rate	%	≥90	≥90	≥90	≥90	≥90	≥90

Note: Water-blocking performance is typically tested in deionized water at 23±2°C. Methods may refer to IEC 60811-507 or as agreed between supplier and buyer.

5. General Properties

Property	Specification	Remarks
Long-Term Stability	100°C	Long-term service temperature
Short-Term Stability	230°C	Short-term withstand temperature (e.g., extrusion process)
Temperature Resistance	-40°C ~ +100°C	Long-term service temperature range
Compatibility with Cable Filling Compound	Good	Compatible with polyolefin-based and petrolatum-based filling compounds; no adverse reaction
Seawater Resistance	Customizable	Seawater-resistant water-blocking tape available upon request

6. Other Characteristics

Appearance: Flat, uniform surface; free from visible impurities, holes, or mechanical damage

Flexibility: Good; easy to wrap and fill

Dimensional Stability: Low thermal shrinkage; stable dimensions during processing and use

Compatibility: Good compatibility with cable conductors, insulation materials, sheath materials, and filling compounds

Stability After Expansion: Gel remains stable after water absorption and expansion; does not dissolve or migrate; ensures long-term water-blocking reliability

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable)

Tape Width: Slittable per customer requirements; tolerance ±0.5 mm

Storage: Must be stored in a cool, dry, clean warehouse; avoid direct sunlight, heat sources, and chemicals. Use as soon as possible after opening; reseal unused portions to prevent moisture.

Shelf Life: 12 months from production date under specified packaging and storage conditions

Cable Phlogopite Mica Tape

1. Product Overview

Product Name: Cable Phlogopite Mica Tape

Product Models: Three-in-One Composite Tape (FMG), Single-Sided Fiberglass Reinforced Tape (MG), Double-Sided Fiberglass Reinforced Tape (MGM)

Material Structure: Natural phlogopite mica paper + fiberglass cloth/film + silicone resin adhesive

Structure Diagram:

FMG: Film + Mica + Glass

MG: Mica + Glass

MGM: Glass + Mica + Glass

Description: A tape-form fire-resistant insulating material made with pure natural phlogopite mica paper as the substrate, fiberglass cloth or polyester film as reinforcing material, and high-performance silicone resin as the adhesive, processed with precision. It inherits the excellent high-temperature resistance, electrical insulation, and chemical stability of phlogopite, while the reinforcing materials provide higher mechanical strength and processing flexibility.

Main Function: Used to manufacture the insulation wrapping layer of various fire-resistant wires and cables. Under high-temperature flames, it forms a robust insulating carbonized layer, ensuring circuit integrity for a certain period.



2. Main Application Areas

Class A/B fire-resistant power cables and control cables

Nuclear power plant cables, marine cables

Fire protection system lines for high-rise buildings, subways, tunnels, and other critical facilities

Aerospace, military, and other specialty high-temperature-resistant wires and cables

3. Specifications

3.1 Three-in-One Phlogopite Mica Tape (FMG: Film + Mica + Glass)

Property	Unit	FMG-0.14	FMG-0.15	FMG-0.16
Thickness	mm	0.14 ± 0.02	0.15 ± 0.02	0.16 ± 0.02
Basis Weight	g/m ²	181 ± 12	203 ± 12	226 ± 13
Mica Content	g/m ²	120 ± 5	140 ± 5	160 ± 5
Fiberglass Content	g/m ²	25 ± 2	25 ± 2	25 ± 2
Film Content	g/m ²	18 ± 2	18 ± 2	18 ± 2
Adhesive Content	g/m ²	18 ± 3	20 ± 3	23 ± 4
Dielectric Strength	kV/layer	> 3.0	> 3.0	> 3.0
Tensile Strength	N/cm	> 120	> 120	> 120

3.2 Single-Sided Fiberglass Phlogopite Mica Tape (MG: Mica + Glass)

Property	Unit	MG-0.10	MG-0.125	MG-0.14
Thickness	mm	0.10 ± 0.015	0.125 ± 0.015	0.14 ± 0.015
Basis Weight	g/m ²	125 ± 9	172 ± 11	216 ± 11
Mica Content	g/m ²	80 ± 3	120 ± 5	160 ± 5
Fiberglass Content	g/m ²	32 ± 3	32 ± 3	32 ± 3
Adhesive Content	g/m ²	13 ± 3	20 ± 3	24 ± 3
Dielectric Strength	kV/layer	> 1.0	> 1.2	> 1.4
Tensile Strength	N/cm	> 120	> 120	> 120

3.3 Double-Sided Fiberglass Phlogopite Mica Tape (MGM: Glass + Mica + Glass)

Property	Unit	MGM-0.15	MGM-0.17
Thickness	mm	0.15 ± 0.02	0.17 ± 0.02
Basis Weight	g/m ²	202 ± 13	225 ± 13
Mica Content	g/m ²	140 ± 5	160 ± 5
Fiberglass Content	g/m ²	42 ± 4	42 ± 2
Adhesive Content	g/m ²	20 ± 4	23 ± 4
Dielectric Strength	kV/layer	> 1.6	> 2.0
Tensile Strength	N/cm	> 120	> 120

4. General Properties

Property	Specification	Remarks
Long-Term Temperature Resistance	750 – 900°C	Pure natural mica, stable performance
Flexibility	Excellent	Easy for tight wrapping
Flame Retardancy	Excellent	Non-combustible material
Chemical Stability	Excellent	Resistant to acid, alkali, oil

5. Packaging & Storage

Packaging: Roll form, with rigid plastic core

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable)

Tape Width: Slittable per customer requirements

Identification: Each roll marked with product name, model, spec (thickness × width), batch no., production date, manufacturer

Storage: Recommended in a cool, dry, ventilated warehouse; prevent mechanical damage and moisture

Shelf Life: 12 months from production date under specified packaging and storage conditions

Synthetic Mica Tape

1. Product Overview

Product Name: Synthetic Mica Tape

Product Models: Three-in-One Composite Tape (FMG), Single-Sided Fiberglass Reinforced Tape (MG), Double-Sided Fiberglass Reinforced Tape (MGM/GMG)

Material Structure: Synthetic mica paper + fiberglass cloth/polyester film + silicone resin adhesive

Structure Diagram:

FMG: Film + Mica + Glass

MG: Mica + Glass

GMG: Glass + Mica + Glass

Description: A tape-form fire-resistant insulating material made with high-performance synthetic mica paper as the substrate, fiberglass cloth or polyester film as reinforcement, bonded with silicone resin. It combines the higher temperature stability of synthetic mica with the excellent mechanical properties of the reinforcing materials, offering outstanding tensile strength, flexibility, and fire resistance. An ideal insulation material for high-end fire-resistant cables.



2. Main Application Areas

Specialty cables for nuclear power, marine, rail transit, and other critical facilities

Class A/B fire-resistant power cables and control cables

Aerospace, military, and other high-temperature, high-reliability wires and cables

Flexible fire-resistant cables (mineral-insulated type)

3. Specifications

3.1 Three-in-One Synthetic Mica Tape (FMG: Film + Mica + Glass)

Property	Unit	FMG-0.14	FMG-0.15	FMG-0.16
Thickness	mm	0.14 ± 0.02	0.15 ± 0.02	0.16 ± 0.02
Basis Weight	g/m ²	181 ± 13	203 ± 13	226 ± 13
Mica Content	g/m ²	120 ± 5	140 ± 5	160 ± 5
Fiberglass Content	g/m ²	25 ± 2	25 ± 2	25 ± 2
Film Content	g/m ²	18 ± 2	18 ± 2	18 ± 2
Adhesive Content	g/m ²	18 ± 4	20 ± 4	23 ± 4
Dielectric Strength	kV/layer	> 3.0	> 3.0	> 3.0
Tensile Strength	N/cm	> 120	> 120	> 120

3.2 Single-Sided Fiberglass Synthetic Mica Tape (MG: Mica + Glass)

Property	Unit	MG-0.10	MG-0.125	MG-0.14
Thickness	mm	0.10 ± 0.015	0.125 ± 0.015	0.14 ± 0.015
Basis Weight	g/m ²	125 ± 10	173 ± 12	193 ± 12
Mica Content	g/m ²	80 ± 3	120 ± 5	140 ± 5
Fiberglass Content	g/m ²	32 ± 3	32 ± 3	32 ± 3
Adhesive Content	g/m ²	13 ± 4	20 ± 4	21 ± 4
Dielectric Strength	kV/layer	> 1.0	> 1.4	> 1.5
Tensile Strength	N/cm	> 120	> 120	> 120

3.3 Double-Sided Fiberglass Synthetic Mica Tape (MGM: Glass + Mica + Glass)

Property	Unit	MGM-0.15	MGM-0.16	MGM-0.18
Thickness	mm	0.15 ± 0.02	0.16 ± 0.02	0.18 ± 0.02
Basis Weight	g/m ²	182 ± 13	202 ± 13	225 ± 13
Mica Content	g/m ²	120 ± 5	140 ± 5	160 ± 5
Fiberglass Content	g/m ²	42 ± 4	42 ± 4	42 ± 4
Adhesive Content	g/m ²	20 ± 4	20 ± 4	23 ± 4
Dielectric Strength	kV/layer	> 1.4	> 1.6	> 2.0
Tensile Strength	N/cm	> 120	> 120	> 120

4. General Properties

Property	Specification	Remarks
Long-Term Temperature Resistance	950 – 1000°C	Synthetic mica; superior to natural mica
Tensile Strength	Good	High tensile strength; stable mechanical properties
Flexibility	Excellent	Easy for tight wrapping
Fire Resistance	Excellent	Meets fire-resistant cable standard requirements
Chemical Stability	Excellent	Resistant to acid, alkali, oil

5. Packaging & Storage

Packaging: Roll form, rigid plastic core

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable)

Tape Width: Slittable per customer requirements

Identification: Each roll marked with product name, model, spec (thickness × width), batch no., production date, manufacturer

Storage: Recommended in a cool, dry, ventilated warehouse; prevent mechanical damage and moisture

Shelf Life: 12 months from production date under specified packaging and storage conditions

Calcined Mica Tape

1. Product Overview

Product Name: Calcined Mica Tape

Product Model: Single-Sided Fiberglass Reinforced Type (MG)

Material Structure: Calcined muscovite mica paper + fiberglass cloth + silicone resin adhesive

Structure: Mica + Glass

Description: A tape-form fire-resistant insulating material made with high-temperature calcined muscovite mica paper as the substrate, fiberglass cloth as reinforcement, and silicone resin as the adhesive. The calcination process gives the mica a more stable structure and better insulation performance. It offers extremely high temperature resistance, excellent flexibility, and good mechanical strength. Especially suitable for applications with limited space and high-reliability fire-resistant insulation requirements.

Core Advantage: Single-layer wrapping can replace traditional double-layer wrapping, achieving equivalent fire resistance while significantly reducing insulation thickness and cost. Especially suitable for the design and application of ultra-small cross-section fire-resistant cables.

Main Function: Fire-resistant insulation wrapping for ultra-small cross-section Class A/B fire-resistant wires and cables, NEV high-voltage harnesses, space-constrained electronic equipment wiring, and lightweight fire-resistant cables for specialty equipment and aerospace.

2. Main Application Areas

Ultra-small cross-section (fine-gauge) Class A/B fire-resistant wires and cables

Fire-resistant protective layer for NEV high-voltage harnesses

Fire-resistant wiring inside space-constrained electronic equipment

Lightweight fire-resistant cables for specialty equipment and aerospace

High-density wiring applications (e.g., data centers, servers)

3. Specifications

Property	Unit	MG-0.10	MG-0.12	MG-0.14	MG-0.16
Thickness	mm	0.10 ± 0.015	0.12 ± 0.015	0.14 ± 0.015	0.16 ± 0.015
Basis Weight	g/m ²	135 ± 10	158 ± 10	181 ± 12	204 ± 12
Mica Content	g/m ²	80 ± 3	100 ± 3	120 ± 5	140 ± 5
Fiberglass Content	g/m ²	32 ± 3	32 ± 3	32 ± 3	32 ± 3
Adhesive Content	g/m ²	23 ± 4	26 ± 4	29 ± 4	32 ± 4
Dielectric Strength	kV/layer	> 1.2	> 1.5	> 1.8	> 2.0
Tensile Strength	N/cm	> 120	> 120	> 120	> 120

4. General Properties

Property	Specification	Remarks
Long-Term Temperature Resistance	950 – 1000°C	Calcination provides more stable mica structure and high temperature resistance
High-Temp Insulation	Excellent	Maintains good dielectric strength at high temperature
Flexibility	Excellent	Easy for tight wrapping; suitable for complex wiring
Fire Resistance	Excellent	Complies with fire-resistant cable standards (e.g., IEC 60331)
Chemical Stability	Good	Resistant to acid, alkali, oil

5. Packaging & Storage

Packaging: Roll form, rigid plastic core

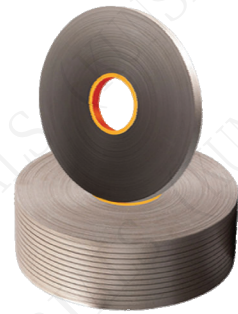
Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable)

Tape Width: Slittable per customer requirements

Identification: Each roll marked with product name, model, spec (thickness × width), batch no., production date, manufacturer

Storage: Recommended in a cool, dry, ventilated warehouse; prevent mechanical damage and moisture

Shelf Life: 12 months from production date under specified packaging and storage conditions



LSZH Flame Retardant Tape

1. Product Overview

Product Name: LSZH Flame Retardant Tape

Material Structure: Fiberglass cloth + double-sided inorganic flame-retardant coating

Description: A wrapping tape made with fiberglass cloth as the substrate, double-side coated with a special inorganic flame-retardant material. It is free from halogens, asbestos, and other harmful substances. It emits extremely low smoke during combustion and offers high dielectric strength and ultra-high limiting oxygen index. Its smooth surface and constant density ensure processing consistency and efficiency. Designed for cables with extremely high safety, environmental, and fire-resistance requirements.

Main Function: Used for insulation wrapping, core bundling, and structural reinforcement layers of various low-smoke halogen-free cables and flame-retardant fire-resistant cables. Effectively improves overall flame retardancy, insulation performance, and safety.



2. Main Application Areas

Construction Engineering: Fire protection system lines for high-rise buildings, subways, tunnels, and other critical facilities

Rail Transit: Cables for subways, tunnels, and other rail transit systems

Public Facilities: Cables for data centers, hospitals, schools, and other densely populated areas

Specialty Fields: Cables for nuclear power plants, ships, and other specialty fields

High Flame Retardancy Requirements: Any Class A and B bunched-burning cables requiring low smoke, halogen-free, and high flame retardancy

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4
Nominal Thickness	mm	0.14	0.16	0.18	0.2
Thickness Tolerance	mm	±0.015	±0.015	±0.018	±0.02
Basis Weight	g/m ²	180 ± 10	190 ± 10	210 ± 10	220 ± 10
Tensile Strength	N/cm	≥ 300	≥ 300	≥ 300	≥ 300

4. Electrical & Flame Retardant Properties

Property	Specification	Remarks
Dielectric Strength	> 5 kV/mm	Excellent electrical insulation
Limiting Oxygen Index (LOI)	≥ 80%	Ultra-high flame retardancy, far exceeding conventional standards
Structural Integrity Temperature	> 1050°C	Maintains structural integrity at extreme high temperature
Halogen Content	None (halogen-free coating)	Eco-friendly and safe; no corrosive acid gas
HCl Generation	< 0.5%	Quantitatively verified low corrosivity
Asbestos Content	None	Harmless to human body and environment
Smoke Density	Extremely low	Meets low-smoke requirements (flaming ≤120P, non-flaming ≤350P)

5. General Properties

Temperature Resistance: Excellent; long-term working temperature up to above 600°C; maintains performance integrity above 1050°C

Corrosion Resistance: Good acid and alkali resistance

Moisture Resistance: Good; inorganic coating does not absorb moisture

6. Other Characteristics

Structure: Fiberglass substrate provides excellent tensile strength and tear resistance

Flexibility: Good; easy for tight wrapping

Consistency: Each roll is splice-free, ensuring continuous and uniform wrapping

7. Packaging & Storage

Packaging: Blister vacuum packaging, effectively moisture-proof, extending storage life

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable)

Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.1 mm

Storage: Recommended in a cool, dry, clean warehouse; avoid contact with chemicals

Shelf Life: 12 months from production date under specified transport and storage conditions

Glass Fiber Tape

1. Product Overview

Product Name: Glass Fiber Tape

Material: E-glass fiber / C-glass fiber

Process: Plain weave / twill weave

Description: Made from high-quality E-glass or C-glass fiber yarns via weaving. Features high temperature resistance, high tensile strength, good insulation, corrosion resistance, and dimensional stability. The tape is soft and easy to wrap, making it an ideal insulation and binding material for wires, cables, motors, and electrical appliances.

Main Function: Used for wrapping insulation layers, binding/fixing layers, and thermal insulation layers of wires and cables; coil binding and insulation wrapping for motors, transformers, and electrical appliances.



2. Main Application Areas

Wires & Cables: Wrapping insulation and thermal insulation layers for fire-resistant cables, high-temperature cables, and mining cables

Composite Materials: Reinforcement material for FRP products

Motors & Electrical Appliances: Motor coil binding, transformer insulation wrapping, internal fixing of electrical appliances

Pipe Insulation: Thermal wrapping protection for high-temperature pipes

Refractory Materials: Base material for fireproof tape and fire barrier layers

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5
Nominal Thickness	mm	0.10 ± 0.02	0.13 ± 0.02	0.15 ± 0.02	0.18 ± 0.03	0.20 ± 0.03
Basis Weight	g/m ²	110 ± 10	135 ± 12	155 ± 15	180 ± 18	200 ± 20
MD Tensile Strength	N/25mm	≥ 400	≥ 450	≥ 500	≥ 550	≥ 600
Elongation at Break	%	≤ 4.0	≤ 4.0	≤ 4.0	≤ 4.0	≤ 4.0

Note: Common thickness range 0.1–0.3 mm; other thicknesses customizable. E-glass tape typically has higher tensile strength than C-glass tape.

4. Chemical Properties

Property	Unit	E-Glass Fiber	C-Glass Fiber	Remarks
Long-Term Service Temp.	°C	-60 ~ +550	-60 ~ +450	—
Short-Term Temp. Resistance	°C	650	550	—
Alkali Metal Oxide Content	%	< 0.8	8 ~ 12	—
Thermal Conductivity	W/m·K	0.035 ~ 0.045	0.035 ~ 0.045	—
Flame Retardancy	—	Non-combustible	Non-combustible	—

5. Electrical Performance

Property	Unit	E-Glass Fiber	C-Glass Fiber	Remarks
Dielectric Strength	kV/mm	≥ 3.0	≥ 2.0	Dry state
Volume Resistivity	Ω·cm	≥ 1 × 10 ¹²	≥ 1 × 10 ¹⁰	—
Surface Resistivity	Ω	≥ 1 × 10 ¹¹	≥ 1 × 10 ⁹	—

6. Other Characteristics

Appearance / Color: White (E-glass) / Light yellow (C-glass)

Surface: Flat, straight edges, uniform weave; neat edges, no burrs; free from weaving defects such as broken warp, missing weft, or float

Plain Weave: Tight interweaving, stable structure; suitable for general wrapping

Twill Weave: Better flexibility; suitable for wrapping irregular surfaces

E-Glass Fiber: Excellent electrical properties; suitable for high insulation requirements

C-Glass Fiber: Cost-effective; suitable for general temperature resistance and thermal insulation

Flexibility: Soft, easy for wrapping; suitable for manual wrapping and high-speed cabling machines

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or woven bag

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 20 mm, tol. ±0.5 mm

Storage: Cool, dry, clean warehouse; avoid direct sunlight and moisture

Shelf Life: 24 months from production date (glass fiber is stable; long-term storage does not affect performance)

Thin Flame-Retardant Cloth Tape

1. Product Overview

Product Name: Thin Flame-Retardant Cloth Tape

Material: Polyester fiber + eco-friendly flame retardant

Process: Fiber impregnated with flame-retardant adhesive, dried and pressed

Description: Made from polyester fiber via eco-friendly flame retardant impregnation, bonding, drying, and pressing; fibers are fully carded. Halogen-free, free from harmful metals, fiberglass, and asbestos; complies with EU RoHS environmental standards. Features thin thickness, good softness, high tensile strength, low smoke emission during combustion, and self-extinguishing upon removal from flame. Especially suitable for cable structures with high requirements on flexibility and flame retardancy.

Main Function: Used for wrapping insulation, core binding, and isolation layers of flame-retardant cables, mining cables, marine cables, high-temperature flame-retardant cables, and other flexible flame-retardant cables. Provides reliable flame-retardant protection and structural support.



2. Main Application Areas

Export Flame-Retardant Halogen-Free Cables: Various flame-retardant cables required for export to European and American standards

Marine Cables: Flame-retardant cables for ships and marine engineering

Mining Cables: Flame-retardant wrapping layer for cables in coal mines and other specialty environments

High-Temperature Flame-Retardant Cables: Cables for metallurgy, petrochemical, and other high-temperature applications

Small Cross-Section Flame-Retardant Cables: Especially suitable for flame-retardant cables with strict outer diameter control and high flexibility requirements

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3
Nominal Thickness	mm	0.08 ± 0.02	0.12 ± 0.02	0.20 ± 0.03
Basis Weight	g/m ²	85 ± 10	130 ± 10	200 ± 20
Tensile Strength	N/cm	≥ 60	≥ 100	≥ 110
Elongation at Break	%	≥ 15	≥ 15	≥ 15
Short-Term Stability	°C	230	230	230
Melting Point	°C	260	260	260

Note: The above are standard specifications. Other thicknesses (e.g., 0.10 mm, 0.15 mm, 0.18 mm) customizable upon request.

4. Flame Retardant Properties

Property	Unit	Spec 1	Spec 2	Spec 3
Limiting Oxygen Index (LOI)	%	≥ 30	≥ 32	≥ 35
Halogen Content	—	Halogen-free	Halogen-free	Halogen-free
Asbestos Content	—	Free	Free	Free
Harmful Metals	—	Free	Free	Free
Smoke Density	—	Low smoke	Low smoke	Low smoke

5. Temperature Resistance

Property	Unit	Specification	Remarks
Long-Term Service Temp.	°C	90 ~ 145	Depends on specific specification and application
Short-Term Temp. Resistance	°C	230	Withstands higher temperature for short periods
Melting Point	°C	260	Material melting temperature

6. Other Characteristics

Appearance: White; smooth, uniform surface; free from impurities and damage; neat edges; no burrs

Process Advantages: Fibers fully carded, high longitudinal strength; uniform flame retardant distribution, stable flame retardancy; thin and lightweight, does not increase cable outer diameter

Softness: Good softness, especially suitable for small cross-section flame-retardant cables; tight wrapping, round appearance after sheathing, no waviness

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton

Tape Width: Slittable per customer requirements; tolerance ±0.5 mm

Core ID: 52 ± 1 mm or 76 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Storage: Cool, dry, clean warehouse; avoid direct sunlight and moisture

Shelf Life: 12 months from production date

Semiconductive Water-Blocking Tape

1. Product Overview

Product Name: Semiconductive Water-Blocking Tape (Non-Insulating Water-Blocking Tape)

Material Structure: Polyester fiber non-woven substrate + conductive carbon black + water-swellaable polymer resin

Process: Impregnation / coating (conductive layer and water-blocking layer composite process)

Description: A functional semiconductive material made on a high-performance polyester fiber non-woven substrate, combined with conductive carbon black and water-swellaable polymer resin via a special process. It provides both stable semiconductive properties and excellent longitudinal water-blocking performance. In dry state, it effectively equalizes the electric field and prevents partial discharge. Upon contact with water, the resin rapidly absorbs water and expands to form a dense gel, blocking water penetration paths. The expanded gel is stable, does not dissolve or migrate, ensuring long-term reliability.

Main Function: Used for conductor screens and insulation screens of MV/HV power cables. Provides dual functions of electric field equalization, anti-static, and longitudinal water blocking. Especially suitable for cable structures with stringent requirements on both water-blocking performance and electrical properties.



2. Main Application Areas

MV/HV Power Cables: Conductor screen water-blocking layer and insulation screen water-blocking layer for XLPE-insulated power cables

Submarine Cables: Composite shielding and water-blocking layer for marine engineering cables

Mining Cables: Shielding and water-blocking protection in wet and harsh environments

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3
Nominal Thickness	mm	0.3	0.4	0.5
Thickness Tolerance	mm	±0.03	±0.03	±0.05
Basis Weight	g/m ²	120 ± 10	140 ± 10	170 ± 15
MD Tensile Strength	N/cm	≥ 35	≥ 40	≥ 45
Elongation at Break	%	≥ 15	≥ 18	≥ 20
Moisture Content	%	≤ 8	≤ 8	≤ 8

4. Electrical Performance

Property	Unit	Specification	Remarks
Surface Resistance	Ω/sq	$1 \times 10^3 \sim 1 \times 10^5$	Stable semiconductive range; customizable
Volume Resistivity	Ω-cm	$1 \times 10^2 \sim 1 \times 10^4$	Ensures electric field equalization and anti-static function

5. Water Resistant Properties

Property	Unit	0.30 mm	0.40 mm	0.50 mm
Expansion Speed	mm/min	≥ 6	≥ 8	≥ 10
Expansion Height	mm/3min	≥ 8	≥ 10	≥ 12
Gel Stability After Expansion	—	Stable, does not dissolve or migrate		
Expansion Retention Rate	%	≥ 90	≥ 90	≥ 90

6. Temperature Resistance

Property	Specification	Remarks
Long-Term Stability	100°C	Long-term service temperature
Short-Term Stability	230°C	Short-term withstand temperature (e.g., extrusion process)
Temperature Resistance	-40°C ~ +100°C	Long-term service temperature range
Compatibility with Cable Filling Compound	Good	Compatible with polyolefin-based and petrolatum-based filling compounds; no adverse reaction
Seawater Resistance	Customizable	Seawater-resistant semiconductive water-blocking tape available upon request

7. Other Characteristics

Appearance: Flat, uniform surface; black or dark gray; free from visible impurities, holes, or mechanical damage

Conductive Uniformity: Uniform distribution of conductive carbon black; good batch-to-batch resistance stability

Dimensional Stability: Low thermal shrinkage; stable dimensions during processing and use

Flexibility: Good; easy to wrap and fill

Compatibility: Good compatibility with cable conductors, insulation materials, sheath materials, and filling compounds

Stability After Expansion: Gel remains stable after water absorption and expansion; does not dissolve or migrate; ensures long-term water-blocking reliability

8. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.1 mm

Storage: Must be stored in a cool, dry, clean warehouse; avoid direct sunlight, heat sources, and chemicals. Use as soon as possible after opening; reseal unused portions to prevent moisture.

Shelf Life: 12 months from production date under specified packaging and storage conditions

Semiconductive Non-Woven Tape

1. Product Overview

Product Name: Semiconductive Non-Woven Tape

Material Structure: Polyester (PET) non-woven fabric + semiconductive carbon-based coating/impregnation

Description: A non-woven tape with stable semiconductive properties through special chemical treatment. It retains the original flexibility, wrapping conformability, tear resistance, and temperature resistance of non-woven fabric, while the introduction of conductive substances controls surface and volume resistance within a specific range. The material effectively provides electrostatic shielding, electric field equalization, prevention of partial discharge, and good cushioning and thermal insulation.

Main Function: Used for conductor screens, insulation screens, metallic screen bedding layers, core bundling and isolation in MV/HV cables, and electrical applications requiring electric field equalization and cushioning protection.



2. Main Application Areas

MV/HV Power Cables: Conductor screen and insulation screen for 6kV to 500kV XLPE cables, DC cables, mining cables, and specialty cables

Dry-Type Transformers: Winding wrapping

Electronic & Electrical Equipment: Electrostatic shielding and cushioning layers

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4
Thickness	mm	0.12 ± 0.03	0.15 ± 0.03	0.18 ± 0.03	0.20 ± 0.03
Basis Weight	g/m ²	50 ± 10	60 ± 10	80 ± 10	100 ± 10
MD Tensile Strength	N/cm	≥ 20	≥ 30	≥ 40	≥ 55
TD Tensile Strength	N/cm	≥ 12	≥ 12	≥ 12	≥ 12
MD Elongation	%	≥ 12	≥ 12	≥ 12	≥ 12
TD Elongation	%	≤ 5	≤ 5	≤ 5	≤ 5

4. Electrical Performance

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4
Surface Resistance	Ω	≤ 800	≤ 800	≤ 800	≤ 800
Volume Resistivity	$\Omega \cdot \text{cm}$	$\leq 5 \times 10^4$	$\leq 5 \times 10^4$	$\leq 5 \times 10^4$	$\leq 5 \times 10^4$
Short-Term Stability	$^{\circ}\text{C}$	230	230	230	230
Long-Term Stability	$^{\circ}\text{C}$	90	90	90	90

5. Other Characteristics

Conductive Mechanism: Carbon black impregnation/coating; stable resistivity

Flexibility: Excellent; easy to wrap and conform to complex shapes

Chemical Stability: Resistant to most weak acids, weak bases, and oils

Flame Retardancy: Substrate is self-extinguishing (higher flame retardancy grades available upon request)

6. Packaging & Storage

Packaging: Roll form, lined with plastic bag, fixed with carton or stretch film

Core ID: 52 mm or 76 ± 1 mm (customizable, e.g., 80 mm)

Tape Width: 10 mm ~ 1000 mm (slittable per customer requirements)

Storage: Recommended in a cool, dry, light-shielded environment; avoid contact with chemicals

Shelf Life: 12 months from production date

Semiconductive Nylon Tape

1. Product Overview

Product Name: Semiconductive Nylon Tape

Material Structure: Nylon (PA6/PA66) fiber substrate + semiconductive carbon-based coating/impregnation

Structure: Flexible fiber cloth-like material

Description: A semiconductive wrapping tape made with high-strength nylon fiber as the substrate, treated with special conductive carbon black composite processing. It perfectly combines the excellent mechanical strength, outstanding abrasion resistance, good flexibility of nylon with stable semiconductive properties. Surface resistance and volume resistance are controlled within a stable range, effectively equalizing the electric field and preventing partial discharge. It also offers the high tensile strength and fatigue resistance characteristic of nylon.

Main Function: Used for conductor screens, insulation screens, and metallic screen bedding layers of MV/HV cables. Especially suitable for cable structural layers requiring high mechanical strength and abrasion resistance, as well as electrical applications needing electric field equalization and cushioning protection.



2. Main Application Areas

MV/HV Power Cables: Conductor screen and insulation screen for XLPE-insulated power cables

Mining Cables: Screen layers for specialty cables used in harsh environments such as coal mines

Drag Chain / Robot Cables: Flexible cable screens requiring repeated bending and abrasion resistance

Rubber-Sheathed Cables: Screen and reinforcement layer for mobile rubber-sheathed flexible cables

Dry-Type Transformers: Winding wrapping and screening

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3
Nominal Thickness	mm	0.1	0.12	0.14
Thickness Tolerance	mm	±0.02	±0.02	±0.02
Basis Weight	g/m ²	90 ± 10	100 ± 10	110 ± 10
Tensile Strength	N/cm	≥ 100	≥ 120	≥ 140
Elongation at Break	%	≥ 25	≥ 25	≥ 25

4. Electrical Performance

Property	Unit	Spec 1	Spec 2	Spec 3
Surface Resistance	Ω	< 1000	< 1000	< 1000
Volume Resistivity	Ω·cm	< 1 × 10 ⁵	< 1 × 10 ⁵	< 1 × 10 ⁵

5. Temperature Resistance

Property	Unit	Spec 1	Spec 2	Spec 3
Short-Term Stability	°C	230	230	230
Long-Term Stability	°C	145	145	145

6. Other Characteristics

Conductive Mechanism: Carbon black impregnation/coating; stable and uniformly distributed resistivity

Mechanical Strength: Nylon substrate provides excellent tensile strength and abrasion resistance, significantly superior to ordinary polyester non-woven

Flexibility: Excellent; easy to wrap and fill; suitable for dynamic bending applications

Chemical Stability: Resistant to most weak acids, weak bases, and oils

Flame Retardancy: Nylon substrate has certain self-extinguishing properties; flame retardancy grade can be upgraded upon request

Temperature Resistance: Long-term service temperature up to 145°C; short-term withstands 230°C

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 5 mm, tol. ±0.1 mm

Storage: Recommended in a cool, dry, light-shielded environment; avoid contact with chemicals

Shelf Life: 12 months from production date

Semiconductive Tetoron Tape

1. Product Overview

Product Name: Semiconductive Tetoron Tape

Material Structure: Tetoron (polyester fiber) + semiconductive carbon-based coating or impregnation

Structure: Flexible fiber cloth-like material

Description: A semiconductive tape made with high-strength Tetoron fiber as the substrate, treated with special conductive carbon black composite processing. It combines excellent mechanical strength, good abrasion resistance, and stable semiconductive properties. Surface resistance and volume resistance are controlled within a stable range, effectively equalizing the electric field and preventing partial discharge, while providing the high tensile strength and fatigue resistance characteristic of Tetoron.

Main Function: Used for conductor screens, insulation screens, and metallic screen bedding layers of HV and EHV cables. Especially suitable for cable structural layers requiring high mechanical strength and abrasion resistance, and electrical applications needing electric field equalization and cushioning protection.



2. Main Application Areas

HV and EHV Power Cables: Conductor screen and insulation screen for XLPE-insulated power cables

Mining Cables: Screen layers for specialty cables used in harsh environments such as coal mines

Drag Chain and Robot Cables: Flexible cable screens requiring repeated bending and abrasion resistance

Rubber-Sheathed Cables: Screen and reinforcement layer for mobile rubber-sheathed flexible cables

Dry-Type Transformers: Winding wrapping and screening

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3
Nominal Thickness	mm	0.18 ± 0.03	0.20 ± 0.03	0.25 ± 0.03
Basis Weight	g/m ²	150 ± 20	170 ± 20	180 ± 20
MD Tensile Strength	N/cm	≥ 220	≥ 220	≥ 220
Elongation at Break	%	≥ 20	≥ 20	≥ 20

4. Electrical Performance

Property	Unit	Spec 1	Spec 2	Spec 3
Surface Resistance	Ω	< 1000	< 1000	< 1000
Volume Resistivity	$\Omega \cdot \text{cm}$	$< 1 \times 10^5$	$< 1 \times 10^5$	$< 1 \times 10^5$

5. Temperature Resistance

Property	Unit	Spec 1	Spec 2	Spec 3
Short-Term Stability	$^{\circ}\text{C}$	230	230	230
Long-Term Stability	$^{\circ}\text{C}$	145	145	145

6. Other Characteristics

Conductive Mechanism: Carbon black impregnation or coating; stable and uniformly distributed resistivity

Mechanical Strength: Tetoron substrate provides excellent tensile strength and abrasion resistance, significantly superior to ordinary polyester non-woven

Flexibility: Excellent; easy to wrap and fill; suitable for dynamic bending applications

Chemical Stability: Resistant to most weak acids, weak bases, and oils

Flame Retardancy: Tetoron substrate has certain self-extinguishing properties; flame retardancy grade can be upgraded upon request

Temperature Resistance: Long-term service temperature up to 145 $^{\circ}\text{C}$; short-term withstands 230 $^{\circ}\text{C}$

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or stretch film

Core ID: 76 $\pm$ 1 mm or 52 $\pm$ 1 mm (customizable); Max. OD: $\leq$ 600 mm

Tape Width: Slittable per customer requirements; min. 5 mm, tol. $\pm$ 0.1 mm

Storage: Recommended in a cool, dry, light-shielded environment; avoid contact with chemicals

Shelf Life: 12 months from production date

Semiconductive Cotton Cloth Tape

1. Product Overview

Product Name: Semiconductive Cotton Cloth Tape

Material Structure: Pure cotton cloth substrate + semiconductive adhesive impregnation coating

Process: Impregnation and drying; fully carded fibers

Description: Made with high-quality pure cotton cloth as the substrate, impregnated with semiconductive adhesive and dried. Fibers are fully carded. Features high longitudinal strength, low resistance, and stable semiconductive properties. Surface and volume resistance are controlled within a stable range, effectively equalizing the electric field and preventing partial discharge, while maintaining the original flexibility and processability of cotton tape.

Main Function: Used for wrapping and shielding layers of mining cables, MV/HV power cables, and other control, communication, signal, and instrument cables requiring shielding. Provides buffering and shielding functions.



2. Main Application Areas

Mining Cables: Wrapping and shielding of insulation screen layers for mining cables

Waterproof Cables: Buffering and shielding layer for waterproof cables

MV/HV Power Cables: Semiconductive water-blocking layer for medium-, high-, and extra-high-voltage power cables

Control / Communication Cables: Control, communication, signal, and instrument cables requiring shielding

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4
Nominal Thickness	μm	100 ± 30	120 ± 30	140 ± 30	250 ± 30
Basis Weight	g/m ²	90 ± 10	100 ± 10	110 ± 10	160 ± 10
Tensile Strength	N/cm	≥ 100	≥ 120	≥ 140	≥ 100
Elongation	%	≥ 20	≥ 25	≥ 25	≥ 12
Instantaneous Stability	°C	230	230	230	230
Long-Term Stability	°C	120	120	120	120

Note: The above are standard specifications. Other thicknesses can be designed upon customer request.

4. Electrical Performance

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4
Surface Resistance	Ω	≤ 1500	≤ 1500	≤ 1500	≤ 1500
Volume Resistivity	Ω·cm	≤ 1 × 10 ⁶	≤ 1 × 10 ⁶	≤ 1 × 10 ⁶	≤ 1 × 10 ⁶

5. Temperature Resistance

Property	Unit	Specification	Remarks
Instantaneous Stability	°C	230	Cable maintains stable performance during instantaneous high temperature
Long-Term Stability	°C	90 ~ 145	Depends on specific specification
Moisture Content	%	≤ 9	—

6. Other Characteristics

Low resistance and stable semiconductive properties

Good heat resistance and high instantaneous temperature resistance

Effectively buffers and weakens electric field strength

High mechanical strength; easy for various cable wrapping and longitudinal covering processes

Smooth, uniform surface; free from visible impurities, holes, or mechanical damage

Fibers fully carded; high longitudinal strength

Processing performance: suitable for various cable wrapping and longitudinal covering; precision slitting available

7. Packaging & Storage

Packaging: Carton packaging

Tape Width: Slittable per customer requirements; min. 10 mm, tol. ±0.1 mm

Core ID: 52 ± 1 mm or 76 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Storage: Store in a cool, dry, ventilated warehouse; avoid direct sunlight and heat sources. Use as soon as possible after opening.

Shelf Life: 12 months from production date

Semiconductive Buffer Tape

1. Product Overview

Product Name: Semiconductive Buffer Tape

Material Structure: Polyester fiber non-woven + semiconductive coating

Process: Impregnation coating

Description: Made with high-performance polyester fiber non-woven as the substrate, impregnated and coated with a special semiconductive compound. It offers stable semiconductive properties, excellent buffering performance, good tensile strength, and thermal stability. Surface and volume resistance are controlled within a stable range, effectively equalizing the electric field and preventing partial discharge, while providing a reliable buffer layer for cable metallic sheaths.

Main Function: Used as buffer layer and semiconductive shielding layer inside metallic sheaths of EHV power cables. Especially suitable for buffer layer structures of power cables rated 110 kV and above, providing buffering protection and electric field equalization for cable cores.



2. Main Application Areas

EHV Power Cables: Buffer layer inside metallic sheaths for 110 kV, 220 kV, 500 kV and above power cables

Submarine Cables: Composite buffer and shielding layer for marine engineering cables

Mining Cables: Mining cable structures requiring buffer protection

Specialty Cables: Cable structures with stringent requirements on both buffer performance and electrical properties

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3
Nominal Thickness	mm	1.5 ± 0.3	2.0 ± 0.3	3.0 ± 0.4
Basis Weight	g/m ²	240 ± 40	260 ± 40	380 ± 50
Tensile Strength	N/cm	≥ 40	≥ 40	≥ 45
Elongation	%	≥ 12	≥ 12	≥ 12
Surface Resistance	Ω	≤ 1000	≤ 1000	≤ 1000
Volume Resistivity	Ω·cm	≤ 1 × 10 ⁵	≤ 1 × 10 ⁵	≤ 1 × 10 ⁵
Short-Term Stability	°C	230	230	230
Long-Term Stability	°C	90	90	90

Note: Other thicknesses (e.g., 1.0 mm, 2.5 mm, 3.0 mm) customizable upon request.

4. Water Resistant Properties

Property	Unit	Spec 1	Spec 2	Spec 3
Expansion Speed	mm/min	≥ 8	≥ 8	≥ 10
Expansion Height	mm/3min	≥ 10	≥ 12	≥ 14
Moisture Content	%	≤ 9	≤ 9	≤ 9

5. Electrical Performance

Property	Unit	Specification	Remarks
Surface Resistance	Ω	≤ 1000	Stable semiconductive properties
Volume Resistivity	Ω·cm	≤ 1 × 10 ⁵	Ensures electric field equalization
Volume Resistivity Dispersion Coefficient	—	Meets standard requirements	Ensures product uniformity

6. Temperature Resistance

Property	Unit	Specification	Remarks
Short-Term Stability	°C	230	Stable performance during instantaneous high temperature
Long-Term Stability	°C	90	Long-term service temperature
Temperature Resistance	°C	-40 ~ +90	Long-term service temperature range

7. Other Characteristics

Appearance and Color: Black (standard)

Surface: Flat and uniform; free from visible impurities, holes, or mechanical damage; uniform semiconductive coating; no missed coating or particles; neat edges; no burrs

Process Advantages:

Excellent Buffering Performance: Provides reliable mechanical buffering for metallic sheaths; absorbs thermal expansion stress

Stable Semiconductive Properties: Stable resistance; uniform electric field; prevents partial discharge

Good Thermal Stability: Instantaneous temperature resistance up to 230°C; meets cable overload conditions

Optional Water-Blocking Function: Water-blocking version provides longitudinal water-blocking performance to prevent water ingress

8. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or woven bag

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 10 mm, tol. ±0.5 mm

Identification: Each roll marked with product name, model, spec (thickness × width), batch no., production date, manufacturer

Storage: Cool, dry, clean warehouse; avoid direct sunlight, chemical contact, and fire sources

Shelf Life: 12 months from production date

Semiconductive Crepe Paper — Product Specification

1. Product Overview

Product Name: Semiconductive Crepe Paper

Material Structure: High-purity cable paper substrate + semiconductive carbon black/graphite coating or impregnation

Process: Crepe processing + semiconductive coating/impregnation

Description: Made with high-purity cable paper as the substrate, mechanically creped to obtain good elongation and flexibility, then treated with carbon black, graphite, or semiconductive coating/impregnation. It is a volume-type semiconductive crepe paper: the semiconductive material is tightly attached to the pulp fibers during papermaking or treatment, providing strong adhesion and uniform resistance. This fundamentally eliminates the disadvantages of surface-type semiconductive materials, such as uneven coating, easy coating detachment, and unstable resistance characteristics. The product features regular creping, no impurities, neat edges, and uniform thickness.



2. Main Application Areas

Main Function: Used for electric field equalization, electrostatic shielding, and stress relief in high-voltage cables, transformers, instrument transformers, and other high-voltage electrical equipment, reducing partial discharge. In cable structures, semiconductive crepe paper is typically wrapped outside the insulation layer as a shielding layer, with both ends connected to the conductor insulation screen, achieving uniform electric field distribution.

3. Specifications & Physical/Mechanical Properties

Base Paper Thickness (mm)	Creped Thickness (mm)	Basis Weight (g/m ²)	Tensile Strength (kN/m)	Elongation (%)
0.05	0.35 ± 0.05	60 ± 10	≥ 2.5	≥ 25
0.08	0.48 ± 0.08	80 ± 12	≥ 2.5	≥ 25
0.13	0.60 ± 0.10	115 ± 15	≥ 2.5	≥ 25
0.16	0.80 ± 0.05	145 ± 18	≥ 2.5	≥ 25

4. Electrical Performance

Property	Unit	Specification	Remarks
Surface Resistivity	Ω/sq	10 ³ ~ 10 ⁶	Customizable upon request
Volume Resistivity	Ω·cm	10 ³ ~ 10 ⁹	Per IEC 60554-3-1
Volume Resistivity (Typical)	Ω·cm	10 ⁵ ~ 10 ⁷ (20°C)	—
Resistance Value (100 mm spacing)	kΩ	40 ± 10 (flattened) / 20 ± 10 (creped)	
Resistance Value (dry state)	kΩ	6 ~ 20	5 mm planar electrode, 100 mm spacing
Dielectric Strength	kV/mm	≥ 8	—
Dissipation Factor	—	≤ 0.01 (50 Hz)	—
Partial Discharge	pC	≤ 5 (for instrument transformers)	
Heat Resistance Class	°C	105 (Class A) / 120 (Class E)	

5. Chemical Properties

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +105°C (Class A) / +120°C (Class E)	—
Oil Vapor Phase Drying	140°C, no delamination	—
Temperature Coefficient of Resistivity	≤ 0.02/°C (-40°C ~ 120°C)	—
Resistivity Change Rate	≤ ±20% (-40°C ~ 120°C)	—
Oil Absorption	Good oil impregnation performance	—
Oil-Immersed Breakdown Voltage Decay Rate	≤ 10%	—
Chemical Resistance	Good	Resistant to transformer oil and insulating oil
Moisture Resistance	Good	Store in dry environment recommended

6. Other Characteristics

Appearance and Color: Black / dark gray (standard)

Surface: Regular creping; free from impurities, pinholes, water marks, and oil stains. Neat edges, clean cut, no notches. Uniform thickness; roll tightly wound without loosening.

Advantages:

Volume-Type Semiconductive: Conductive material tightly attached to fibers; strong adhesion; uniform resistance; no shedding

Electric Field Equalization: Effectively uniform electric field distribution; reduces partial discharge

Excellent Flexibility: Crepe structure provides excellent elongation; suitable for tight wrapping

Good Heat Resistance: Class E (120°C); no delamination after 140°C oil vapor phase drying

Excellent Oil Impregnation Performance: Suitable for oil-immersed transformers and oil-filled cables

Lightweight: Reduces product cost

7. Packaging & Storage

Packaging: Roll form, sealed in moisture-proof plastic bag, fixed with carton or woven bag

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable); Max. OD: ≤ 600 mm

Tape Width: Slittable per customer requirements; min. 10 mm, tol. ±0.5 mm

Identification: Each roll marked with product name, model, spec (thickness × width), batch no., production date, manufacturer

Storage: Cool, dry, clean warehouse; avoid direct sunlight, chemical contact, and fire sources

Shelf Life: 12 months from production date

PP Mesh Filler Yarn

1. Product Overview

Product Name: PP Mesh Filler Yarn

Material: Polypropylene (PP)

Process: Extrusion + mesh stretching process

Description: A mesh-structured filler yarn made from premium polypropylene resin via a special process. Features lightweight, soft, good elasticity, chemical corrosion resistance, and non-hygroscopicity. The mesh structure effectively fills core gaps during cable cabling while maintaining good cushioning performance and structural stability.

Main Function: Used for core gap filling during cabling of power cables, communication cables, optical cables, etc. Makes cables round and structurally stable, and provides cushioning protection.



2. Main Application Areas

Power Cables: Cabling filling for MV/LV power cables

Optical Cables: Loose tube gap filling for optical cables

Communication Cables: Core filling for local communication cables and office cables

Control Cables: Cabling filling for instrument control cables

Flexible Cables: Cushioning filler layer for drag chain cables and robot cables

3. Specifications & Physical/Mechanical Properties

Specification (Denier)	Twisted Diameter (mm)	Weight per Meter (g/m)	Breaking Force (≥)	Elongation (%)	Thermal Shrinkage (%)
8000D	Φ 1.0 ± 0.15	0.8 ± 0.2	20 N	≥15	≤3
15000D	Φ 1.4 ± 0.15	1.5 ± 0.2	30 N	≥15	≤3
20000D	Φ 1.8 ± 0.15	2.0 ± 0.2	40 N	≥15	≤3
30000D	Φ 2.5 ± 0.15	3.0 ± 0.3	60 N	≥15	≤3
40000D	Φ 3.0 ± 0.15	4.0 ± 0.3	75 N	≥15	≤3
60000D	Φ 4.0 ± 0.15	6.0 ± 0.3	100 N	≥15	≤3
80000D	Φ 4.5 ± 0.15	8.0 ± 0.3	110 N	≥15	≤3
90000D	Φ 5.0 ± 0.15	9.0 ± 0.5	125 N	≥15	≤3
100000D	Φ 5.3 ± 0.15	10.5 ± 0.5	140 N	≥15	≤3
120000D	Φ 5.5 ± 0.15	12.0 ± 0.5	150 N	≥15	≤3
145000D	Φ 6.0 ± 0.15	14.5 ± 0.5	175 N	≥15	≤3
165000D	Φ 7.0 ± 0.25	16.5 ± 0.5	200 N	≥15	≤3
190000D	Φ 7.5 ± 0.25	19.0 ± 1.0	220 N	≥15	≤3
270000D	Φ 8.0 ± 0.25	27.0 ± 1.0	240 N	≥15	≤3
300000D	Φ 8.8 ± 0.3	30.0 ± 1.5	260 N	≥15	≤3

Note 1: The above are standard specifications. Other intermediate specifications are customizable.

Note 2: Thermal shrinkage test condition: 100°C × 30 min.

4. Temperature Resistance

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +120°C	—
Short-Term Temperature Resistance	150°C	—
Chemical Resistance	Good	Resistant to most weak acids, weak bases, oils, and solvents
Moisture Resistance	Excellent	Non-water-absorbing; stable performance

5. Other Characteristics

Appearance: Uniform mesh structure; no broken filaments; no knots.

Color: White (standard); other colors customizable. Clean surface; free from oil stains and impurities.

Flexibility: Good; easy to fill and process.

Mesh Structure Advantages: Good elasticity; uniform rebound after filling. Stable structure; not easy to loosen. Lightweight; does not increase cable weight.

6. Packaging & Storage

Packaging: Roll or spool packaging; lined with moisture-proof plastic bag; outer carton or woven bag.

Core ID: Small tube 38 × 245 mm or large tube 60 × 310 mm (customizable).

Weight per Roll: Typically 5–20 kg/roll depending on specification (negotiable).

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact.

Shelf Life: 12 months from production date.

Transparent PP Mesh Filler Yarn

1. Product Overview

Product Name: Transparent PP Mesh Filler Yarn

Material: Polypropylene (PP) + special modifier

Process: Formed by specialized mesh-opening machine; optional twisting

Description: Made with PP as the base material and a special modifier, processed into a high-strength mesh filler material by a specialized mesh-opening machine. Features transparent appearance, excellent softness, light weight, non-hygroscopicity, and high tensile strength. Can be twisted upon customer request or made into flame-retardant filler yarn by adding eco-friendly flame retardant. The transparent appearance makes it more suitable for cable structures with special color requirements.

Main Function: Used for lightweight structural filling of composite communication cables, power cables, specialty flame-retardant and fire-resistant cables, and steel wire ropes. Makes cable structures round and stable, and increases tensile strength.



2. Main Application Areas

Communication Cables: Core gap filling for composite communication cables

Steel Wire Ropes: Filler core material for steel wire ropes

Power Cables: Structural filling and reinforcement for MV/LV power cables

Specialty Cables: Filler material for flame-retardant and fire-resistant cables

Other Cables: Transparent or translucent cable structures with special color requirements

3. Specifications & Physical/Mechanical Properties

Specification (Denier)	Length per kg (m/kg)	Twisted Diameter (mm)	Breaking Force (≥ N)	Elongation (≤ %)	Thermal Shrinkage (≤ %)
2000D	4500	0.4	30	15	2.5
4000D	2400	0.5	50	15	2.5
5000D	1800	0.6	55	15	2.5
8000D	1125	1	80	15	2.5
10000D	935	1.2	90	15	2.5
12000D	750	1.5	100	15	2.5
15000D	600	1.8	150	15	2.5
20000D	450	2.2	200	15	2.5
30000D	300	2.6	300	15	2.5

Note 1: The above specifications refer to common industry standards. Other specifications are customizable upon request.

Note 2: Breaking force is expressed in Newtons (N), consistent with industry practice.

4. Other Characteristics

Appearance / Color: Transparent (standard); flame-retardant type is light blue.

Surface: Uniform mesh structure; free from broken filaments and impurities.

Product Features:

Excellent Softness: Easy to fill and process.

Good Chemical Resistance: Resistant to acids, bases, and mildew.

Lightweight: Non-hygroscopic material; strength unaffected by moisture.

Excellent Electrical Properties: Good high-frequency insulation and voltage withstand.

High Tensile Strength: Provides good structural support.

Eco-Friendly and Non-Toxic: Meets environmental requirements.

Processing Performance:

Can be twisted upon customer request.

Can be made into flame-retardant filler yarn (light blue) by adding eco-friendly flame retardant.

Suitable for high-speed cabling operations.

5. Packaging & Storage

Packaging: Roll or spool packaging; lined with moisture-proof plastic bag; fixed with carton or woven bag.

Core ID: Small tube 38 × 245 mm or large tube 60 × 310 mm (customizable).

Weight per Roll: Typically 5–20 kg/roll depending on specification (negotiable).

Storage: Store in a cool, dry, clean warehouse; avoid direct sunlight and chemical contact.

Shelf Life: 12 months from production date.

LSHF Flame-Retardant PP Rope

1. Product Overview

Product Name: LSHF Flame-Retardant PP Rope

Material: Polypropylene (PP) + eco-friendly halogen-free flame retardant

Process: Extrusion + flame-retardant blending

Description: Made from premium PP material via a special halogen-free flame-retardant formula and process. Features low smoke, halogen-free, flame retardancy, and high toughness. Emits low smoke during combustion and does not release toxic hydrogen halide gas, meeting environmental and safety requirements. Soft texture and good filling performance make it an ideal filler rope and strength member for cables, optical cables, and other wire harness products.

Main Function: Used for core gap filling, structural reinforcement, and cushioning protection of wires, cables, and optical cables. Meets flame-retardant, low-smoke, and halogen-free environmental safety requirements.



2. Main Application Areas

Communication Cables / Optical Cables: Filler rope for local communication cables and optical cables

Control Cables: Core filling for instrument control cables

Power Cables: Filling and reinforcing member for MV/LV power cables

Harnesses / Pipes: Core support material for harnesses and pipes

Other Applications: Bundling and filling applications requiring flame-retardant, low-smoke, and halogen-free properties

3. Specifications & Physical/Mechanical Properties

Specification (Denier)	Diameter (mm)	Weight per Meter (g/m)	Breaking Force (≥ N)	Elongation (≤ %)	Oxygen Index (≥ %)	Core Size (mm)
7400	1.5	1.4 ± 8%	50	21	28	38 × 245
10000	2	2.0 ± 8%	90	21	28	38 × 245
15000	2.5	2.6 ± 8%	140	21	28	38 × 245
31000	3	3.5 ± 8%	210	21	28	38 × 245
35000	3.5	5.0 ± 8%	280	21	28	38 × 245
53000	4	6.0 ± 8%	370	21	28	60 × 310
60000	4.5	6.5 ± 8%	470	21	28	60 × 310
63000	5	7.0 ± 8%	580	21	28	60 × 310
207000	8	23 ± 8%	1000	21	28	60 × 310
297000	10	33 ± 8%	1000	21	28	60 × 310

Note 1: 1D = 1/9000 kg/km. Other intermediate specifications customizable.

Note 2: Weight per meter tolerance adjustable per customer requirements.

4. Flame Retardant Properties

Property	Unit	Specification	Test Standard
Limiting Oxygen Index (LOI)	%	≥ 28	GB/T 2406.2
Halogen Content	—	Halogen-free (Cl, Br ≤ 0.5%)	GB/T 17650.1 and IEC 60754-1
pH Value	—	≥ 4.3	GB/T 17650.2 and IEC 60754-2
Conductivity	μS/mm	≤ 10	GB/T 17650.2 and IEC 60754-2
Smoke Density (Flaming)	—	≤ 100	GB/T 17651.2 and IEC 61034-2
Smoke Density (Non-Flaming)	—	≤ 350	GB/T 17651.2 and IEC 61034-2

5. Temperature Resistance

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +120°C	—
Short-Term Temperature Resistance	150°C	—
Chemical Resistance	Good	Resistant to most weak acids, weak bases, oils, and solvents
Moisture Resistance	Excellent	Non-water-absorbing; stable performance

6. Other Characteristics

Appearance: Smooth surface; uniform color.

Color: White (standard); other colors customizable.

Impurities: Free from impurities, oil stains, and mechanical damage.

Flexibility: Good; easy to fill and process.

7. Packaging & Storage

Packaging: Roll or spool packaging; lined with moisture-proof plastic bag; fixed with outer carton or woven bag.

Packaging Method: Plastic bag or stretch film wrapping; outer carton or stretch film fixing.

Core ID: Small tube 38 × 245 mm or large tube 60 × 310 mm (customizable).

Weight per Roll: Typically 5–20 kg/roll depending on specification (negotiable).

Storage: Store in a cool, dry, clean warehouse; avoid direct sunlight and chemical contact.

Shelf Life: 12 months from production date.

Lightweight LSZH High FR Filler Rope

1. Product Overview

Product Name: Lightweight LSZH High FR Filler Rope

Description: Produced by flat-pulling method, refined through sizing, drying, slitting, winding, and twisting. As a cable cabling filler material, it features light weight, soft texture, uniform thickness, and non-hygroscopicity, along with excellent low-smoke, halogen-free, and high flame-retardant properties. It significantly improves cable structural integrity and safety rating.

Main Function: Used for core gap filling during cabling of power cables, communication cables, etc. Makes cables round and structurally stable, while meeting high flame-retardant and environmental safety requirements.



2. Main Application Areas

Various power cables, control cables, communication cables, and optical cables requiring low smoke, halogen-free, and high flame retardancy. Especially suitable for densely populated locations such as subways, airports, hospitals, shopping malls, and high-rise buildings where high cable safety ratings are required.

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7	Spec 8	Spec 9
Nominal Diameter	mm	1.5	2	3	4	5	6	7	8	9
Weight per Unit Length ($\leq$)	g/m	1.63	2.18	2.64	3.86	5.45	7.95	10	12.72	15.9
Tensile Strength ($\geq$)	N	60	70	80	100	120	150	180	250	260
Elongation ($\geq$)	%	15	15	20	20	20	20	20	20	20
Diameter Tolerance	mm	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5
Twist per 200 mm	pcs	3~5	3~5	3~5	3~5	3~5	3~5	3~5	3~5	3~5

4. Flame Retardant Properties

Property	Test Standard	Unit	Requirement
Halogen Acid Gas Content (HCl)	GB/T 17650.1	%	≤ 0.5
pH Value	GB/T 17650.2	—	≥ 4.3
Conductivity	GB/T 17650.2	$\mu\text{S}/\text{mm}$	≤ 10
Smoke Density (Flaming)	GB/T 17651.2	—	≤ 100
Smoke Density (Non-Flaming)	GB/T 17651.2	—	≤ 350
Oxygen Index (OI)	GB/T 2406.2	%	≥ 38
Moisture Content	Enterprise standard method	%	≤ 1.0

5. Other Characteristics

Appearance: Uniform color, white; dry, contamination-free, soft texture, uniform thickness, non-hygroscopic; firm knots.

Environmental Performance: Does not release toxic halogen gas during combustion; low corrosivity and low smoke concentration.

Thermal Stability: Good heat resistance.

Processability: Good flexibility; easy to process and fill.

6. Packaging & Storage

Packaging: Roll packaging.

Identification: Each product label shall indicate manufacturer name and address, product name and model/specification, manufacturing date, and standard number.

Storage & Transportation: Store and transport in a dry environment, avoiding direct sunlight, moisture, and rain.

Shelf Life: 12 months from production date.

Cable Filling Cotton Yarn

1. Product Overview

Product Name: Cable Filling Cotton Yarn

Material: 100% premium long-staple cotton fiber, or cotton blend approved by customer

Form: Round or oval compact yarn

Description: Made from high-grade cotton fiber via combing, drawing, and spinning processes. A compact, smooth, and strong yarn with excellent flexibility, filling performance, moisture absorption, and chemical compatibility. Specifically designed for core gap filling in communication cables, optical cables, control cables, etc., to achieve structural roundness, mechanical stress cushioning, and water/moisture blocking.

Main Function:

Structural Filling: Fills gaps between cable cores to form a stable, round cable structure.

Cushioning Protection: Provides mechanical cushioning for optical fibers or conductors against bending, compression, and impact.

Water/Moisture Blocking: Utilizes cotton fiber hygroscopicity as a carrier for water-blocking cable gel or dry water-blocking materials.

Identification: Custom colors available for pair or fiber bundle identification.



2. Main Application Areas

Various communication cables (e.g., data cables, telephone cables)

Indoor and outdoor optical cables (central tube and stranded loose tube filling)

Elevator traveling cables and robotic flexible cables

Military field cables and specialty cables

Industrial control cables and instrument cables

3. Specifications & Physical/Mechanical Properties

Diameter (mm)	10S Spec	10S Length per kg (m/kg)	7S Spec	7S Length per kg (m/kg)	Breaking Strength (N)	Elongation at Break (%)	Moisture Regain (%)
1.0	10S×6C	2874 ± 8%	7S×4C	3016 ± 8%	≥ 30	8 ~ 20	6.0 ~ 9.0
1.5	10S×12C	1437 ± 8%	7S×8C	1508 ± 8%	≥ 60	8 ~ 20	6.0 ~ 9.0
2.0	10S×24C	718 ± 8%	7S×16C	754 ± 8%	≥ 90	8 ~ 20	6.0 ~ 9.0
2.5	10S×38C	454 ± 8%	7S×25C	482 ± 8%	≥ 130	8 ~ 20	6.0 ~ 9.0
3.0	10S×54C	319 ± 8%	7S×36C	335 ± 8%	≥ 170	8 ~ 20	6.0 ~ 9.0
3.5	10S×74C	233 ± 8%	7S×49C	245 ± 8%	≥ 210	8 ~ 20	6.0 ~ 9.0
4.0	10S×96C	180 ± 8%	7S×64C	189 ± 8%	≥ 250	8 ~ 20	6.0 ~ 9.0
4.5	10S×122C	141 ± 8%	7S×81C	148 ± 8%	≥ 290	8 ~ 20	6.0 ~ 9.0
5.0	10S×150C	115 ± 8%	7S×100C	120 ± 8%	≥ 340	8 ~ 20	6.0 ~ 9.0

Note 1: 10S and 7S are English cotton count systems; lower count means thicker yarn. Specifications are for reference only; actual ply specifications customizable per customer request.

Note 2: Approximate weight per meter: 10S single yarn ≈ 0.058 g/m; 7S single yarn ≈ 0.0829 g/m.

4. Electrical Performance

Property	Unit	Specification	Remarks
Moisture Content	%	≤ 8.0	GB/T 9995-1997
pH Value	—	6.0 ~ 8.0	GB/T 7573-2009
Oil Content	%	≤ 1.0	FZ/T 20002-2010
Long-Term Service Temperature	°C	-30 ~ +70	Continuous working temperature
Short-Term Temperature Resistance	°C	105	Short-term withstand

5. Chemical Properties

Chemical Compatibility: Cotton fiber is inherently resistant to weak acids and weak bases, but degrades in strong acids or strong bases. Ensure compatibility with other cable materials (e.g., PE, PP, PVC, PBT sheath/insulation materials).

Precipitation Control: No visible fiber shedding or oil precipitation, to avoid affecting cable electrical performance, especially in high-frequency applications.

6. Other Characteristics

Appearance: Smooth, uniform surface; consistent color; free from stains, broken ends, and knots; neatly and tightly wound.

Color: Natural (standard) / Colored (optional)

Flexibility: Excellent; bends with the cable without permanent creases or breakage.

Uniformity: Uniform diameter and linear density; ensures stable tension and round structure during cable production.

Processability: Good pay-off performance on high-speed cabling equipment; resistant to breakage and kinking.

7. Packaging & Storage

Roll Form: Paper tube

Core ID: 50 ± 1 mm (standard) / other customizable; Roll OD: ≤ 300 mm (standard)

Weight per Roll: Approx. 5 kg/roll (depends on diameter and roll size; adjustable for large specifications)

Packaging: Plastic film inner packaging; outer woven bag for moisture, dust, and impact protection.

Identification: Each roll marked with product name, model, specification (count × ply), batch no., production date, manufacturer name.

Storage: Store in a cool, dry, ventilated, clean warehouse; avoid direct sunlight and high-temperature heat sources.

Shelf Life: 12 months from production date.

Cable Jute Rope

1. Product Overview

Product Name: Cable Jute Rope (Cable Filling Jute Rope)

Material: Premium jute fiber

Form: Single-ply or multi-ply twisted yarn

Description: Made from premium jute fiber via combing, drawing, and twisting. Features no jute bark, no impurities, good yarn evenness, high tensile strength, and resistance to breakage. Knot-free full roll design improves cable production efficiency. Filling rubber-sheathed cables makes the cable structure firm, flexible, and uniformly round.

Main Function: Used for core gap filling, structural reinforcement, and tensile strength improvement of wires and cables. Makes cable structure round and stable, and increases cable tensile strength.



2. Main Application Areas

Rubber-Sheathed Cables: Core filling for mobile rubber-sheathed flexible cables

Power Cables: Structural filling and reinforcement for MV/LV power cables

Control Cables: Core filling for instrument control cables

Steel Wire Rope Core: Jute core material for steel wire ropes

Other Uses: Bundling, packaging, tying equipment, crafts, etc.

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7	Spec 8
Diameter	mm	1.5	2	2.5	3	3.5	4	4.5	5
Specification	—	Fine 2	10S × 3C	Fine 3	Fine 4	Coarse 3	Coarse 5	Coarse 6	Coarse 10
Ply	ply	2	3	3	4	3	5	6	10
Count Irregularity	%	≤8.0	≤8.0	5.1	≤8.0	≤8.0	≤8.0	≤8.0	≤8.0
Tensile Strength	N	≥100	≥130	≥186	≥220	≥260	≥320	≥380	≥450
Strength Irregularity	%	≤12	≤12	8.2	≤12	≤12	≤12	≤12	≤12
Twist	turns/10cm	16 ± 2	15 ± 2	11 ± 2	13 ± 2	10 ± 2	9 ± 2	8 ± 2	7 ± 2
Twist Irregularity	%	≤10	≤10	6.4	≤10	≤10	≤10	≤10	≤10
Moisture Content	%	≤18	≤18	16.1	≤18	≤18	≤18	≤18	≤18

Note: Twist can be adjusted per customer process requirements. Standard twist direction: S or Z.

4. Other Characteristics

Material Properties:

Natural jute fiber; eco-friendly and renewable

Strong flexibility; stable structure after filling

Good tensile strength; not easy to break

Appearance:

Free from jute bark and impurities

Good yarn evenness; natural yellow color

Processing Performance:

Good yarn evenness; suitable for high-speed cabling

Free from jute bark and impurities; does not contaminate cable structure

Twist level customizable per customer requirements

5. Packaging & Storage

Roll Form: Paper tube

Core ID: Small tube 38 × 260 mm

Weight per Roll: Approx. 10 kg/roll (depends on diameter and roll size; adjustable for large specifications)

Identification: Each roll marked with product name, model, specification (count × ply), batch no., production date, manufacturer name

Packaging: Woven bag

Storage: Store in a cool, dry, clean warehouse; avoid direct sunlight and moisture

Shelf Life: 12 months from production date

High-Strength Polyester Yarn

1. Product Overview

Product Name: High-Strength Polyester Yarn / PET Yarn / Tetoron Yarn

Material: Polyethylene terephthalate (PET)

Product Models: Expressed in Denier (D), ranging from 70D to 3000D; other special specifications customizable.

Description: Made from premium polyester chips via precision melt spinning and high-efficiency drawing. Specifically designed for the wire and cable industry. Features high strength, high modulus, low elongation, excellent dimensional stability, heat resistance, and UV aging resistance. Polyester yarn has low moisture absorption, good electrical insulation, and resistance to most chemicals. A high-performance reinforcing material that maintains long-term stable performance in harsh environments.

Main Function: Used for core gap filling of wires and cables (providing stable support and ensuring round cable structure) and outer braiding reinforcement (providing excellent tensile and creep resistance, and can be used for identification or auxiliary shielding).



2. Main Application Areas

Cable Filling: Cabling filler material for power cables, communication optical cables, and control cables.

Cable Braiding:

Reinforcement Protective Layer: Outer braiding reinforcement layer for optical cable strength members, elevator cables, mining cables, and outdoor weather-resistant cables.

Dimensional Stability Layer: For applications requiring low elongation and creep resistance.

Industrial Auxiliary Materials: High-strength sewing thread, conveyor belt framework, industrial filter cloth, safety nets, etc.

3. Specifications & Physical/Mechanical Properties

Specification (Denier)	Length per kg (m/kg)	Approx. Diameter (mm)	Breaking Strength (≥)	Elongation at Break (%)	Dry Heat Shrinkage (≤)	Oil Content (%)
70	128,571	0.12	7.5 g/D	16 ± 2%	3.50%	0.7% – 1.2%
108	83,333	0.15	7.5 g/D	16 ± 2%	3.50%	0.7% – 1.2%
120	75,000	0.16	7.5 g/D	16 ± 2%	3.50%	0.7% – 1.2%
150	60,000	0.18	7.5 g/D	16 ± 2%	3.50%	0.7% – 1.2%
250	36,000	0.2	7.5 g/D	16 ± 2%	3.50%	0.7% – 1.2%
420	21,429	0.23	7.5 g/D	18 ± 3%	3.50%	0.7% – 1.2%
500	18,000	0.25	8.0 g/D	18 ± 3%	3.50%	0.7% – 1.2%
630	14,286	0.28	8.0 g/D	18 ± 3%	3.50%	0.7% – 1.2%
840	10,714	0.32	8.0 g/D	18 ± 3%	3.50%	0.7% – 1.2%
1000	9,000	0.35	8.0 g/D	18 ± 3%	3.50%	0.7% – 1.2%
1260	7,143	0.4	8.0 g/D	18 ± 3%	3.50%	0.7% – 1.2%
2000	4,500	0.5	8.0 g/D	18 ± 3%	3.50%	0.7% – 1.2%
3000	3,000	0.61	8.0 g/D	18 ± 3%	3.50%	0.7% – 1.2%

Note 1: Breaking strength estimated based on high-strength polyester monofilament strength ≥ 7.0 cN/dtex; actual value subject to measurement.

Note 2: 1 D = 1.111 dtex. Dry heat shrinkage test condition: 177°C × 30 min.

4. Other Characteristics

Property	Remarks
High Strength & High Modulus	High initial modulus, low elongation; provides excellent tensile and creep resistance (dimensional stability).
Heat Resistance	Good; long-term service temperature -40°C ~ +130°C; short-term up to 150°C. Melting point approx. 255°C.
Low Moisture Absorption	Moisture regain only about 0.4% under standard atmosphere; performance minimally affected by humidity; dimensional stability.
Chemical Resistance	Resistant to weak acids, weak bases, and most solvents; resistant to bleaching agents and oxidants.
Light & Weather Resistance	Excellent; UV resistance far superior to nylon and other fibers; suitable for long-term outdoor use.
Abrasion Resistance	Good, but slightly inferior to nylon.
Electrical Insulation	Good; high volume resistivity.
Dyeability	Can be dyed with disperse dyes at high temperature and pressure; good color fastness.
Color	Standard white; other colors customizable upon request.

5. Packaging & Storage

Paper Tube Specifications:

Tall tube: 270 mm (height) × 220 mm (OD) × 94 mm (ID)

Short tube: 220 mm (height) × 250 mm (OD) × 127 mm (ID)

Net Weight: 8–15.0 kg per tube depending on denier specification (negotiable); 16 tubes/layer, 4 layers/pallet.

Outer Packaging: Lined with moisture-proof film; outer carton or plastic film wrapping for firm protection.

Storage: Store in a cool, dry, ventilated warehouse; avoid direct sunlight; keep away from heat sources and chemicals.

Shelf Life: 18 months from production date under specified packaging and storage conditions.

High-Tenacity Polyester Thread

1. Product Overview

Product Name: High-Tenacity Polyester Thread (High-Tenacity Polyester Yarn / Twisted Polyester Thread)

Material: Polyethylene terephthalate (PET)

Structure: 3-ply twisted yarn

Description: Made from high-tenacity polyester industrial yarn via precision plying and twisting. Features ultra-high strength, low elongation, high modulus, heat resistance, abrasion resistance, and dimensional stability. The 3-ply twisted structure provides good roundness and high abrasion resistance. Suitable for cable filling, braiding reinforcement, industrial sewing, and high-strength ropes.

Main Function: Cable cabling filling and binding, braided shielding reinforcement layers, industrial sewing, high-strength ropes, lifting slings, etc.

2. Main Application Areas

Wires & Cables: Filling, core binding, braided shielding reinforcement

Composite Materials: Reinforcing fibers, tire cord

Industrial Sewing: Filter bags, airbags, footwear, leather sewing

Sports Equipment: Tennis racket strings, fishing lines

Ropes & Webbing: High-strength ropes, lifting slings, safety belts



3. Specifications & Physical/Mechanical Properties

Specification (D×3)	Approx. Diameter (mm)	Length per kg (m/kg)	Breaking Strength (N)	Elongation at Break (%)	Dry Heat Shrinkage (%)	Oil Content (%)
150D×3	0.23	20000	≥ 60	≤ 15	≤ 6	0.8–1.2
210D×3	0.28	14286	≥ 84	≤ 15	≤ 6	0.8–1.2
300D×3	0.33	10000	≥ 120	≤ 15	≤ 6	0.8–1.2
420D×3	0.39	7143	≥ 168	≤ 15	≤ 6	0.8–1.2
500D×3	0.43	6000	≥ 200	≤ 15	≤ 6	0.8–1.2
630D×3	0.48	4762	≥ 252	≤ 15	≤ 6	0.8–1.2
840D×3	0.55	3571	≥ 336	≤ 15	≤ 6	0.8–1.2
1000D×3	0.6	3000	≥ 400	≤ 15	≤ 6	0.8–1.2
1260D×3	0.68	2381	≥ 504	≤ 15	≤ 6	0.8–1.2
1500D×3	0.74	2000	≥ 600	≤ 15	≤ 6	0.8–1.2
2000D×3	0.85	1500	≥ 800	≤ 15	≤ 6	0.8–1.2
3000D×3	1.04	1000	≥ 1200	≤ 15	≤ 6	0.8–1.2

Note 1: Breaking strength estimated based on high-tenacity polyester monofilament strength ≥ 7.0 cN/dtex; actual value subject to measurement.

Note 2: 1 D = 1.111 dtex. Dry heat shrinkage test condition: 177°C × 30 min.

4. Electrical Performance

Property	Unit	Specification	Remarks
Volume Resistivity	$\Omega\cdot\text{cm}$	$\geq 1 \times 10^{14}$	Excellent electrical insulation
Dielectric Strength	kV/mm	≥ 20	Dry state

5. Temperature Resistance

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +130°C	Continuous working temperature
Short-Term Temperature Resistance	150°C	Short-term withstand
Melting Point	≈ 255°C	—
Chemical Resistance	Good	Resistant to weak acids, weak bases, and most solvents
Light & Weather Resistance	Excellent	Good UV resistance
Abrasion Resistance	Good	Superior to monofilament after plying
Low Moisture Absorption	≤ 0.4%	Moisture regain under standard atmosphere

6. Other Characteristics

Appearance: Natural (white) or custom black/colored; smooth and uniform surface; uniform twist; no burrs.

Plying Advantages: 3-ply twisted structure provides good roundness, improved abrasion resistance, and stable twist that does not easily loosen.

Processing Performance: Suitable for high-speed braiding, sewing, and wrapping; stable tension; resistant to breakage; twist direction (S/Z) and twist level adjustable upon request.

7. Packaging & Storage

Packaging: Spool (cone) or cheese.

Core ID: 76 ± 1 mm or 52 ± 1 mm (customizable).

Net Weight: 0.5–2 kg/spool (depending on specification; negotiable).

Outer Packaging: Lined with moisture-proof film; outer carton or plastic film wrapping.

Storage: Recommended in a cool, dry, clean warehouse; avoid contact with chemicals.

Shelf Life: 24 months from production date under specified packaging and storage conditions.

FR High-Tenacity Polyester Filament Yarn

1. Product Overview

Product Name: FR High-Tenacity Polyester Filament Yarn

Material: Polyethylene terephthalate (PET) + eco-friendly flame retardant

Description: Made from premium polyester chips with eco-friendly flame retardant masterbatch via precision melt spinning and high-efficiency drawing. Retains the high strength, high modulus, low elongation, and excellent dimensional stability of high-tenacity polyester yarn, while providing superior flame retardancy. Offers good heat resistance, UV aging resistance, low moisture absorption, and excellent electrical insulation. A high-performance flame-retardant reinforcing material maintaining long-term stable performance in harsh environments.

Main Function: Used for core gap filling, outer braiding reinforcement, and flame-retardant protective layers of wires and cables. Provides excellent tensile and creep resistance while meeting flame-retardant requirements.



2. Main Application Areas

Flame-Retardant Cables: Filling and braiding reinforcement for power cables and control cables requiring flame-retardant ratings

Mining Cables: Flame-retardant reinforcement layer for cables in coal mines and other specialty environments

Marine Cables: Braiding layer for flame-retardant cables in ships and marine engineering

Optical Cables: Strength members and reinforcement materials for flame-retardant optical cables

Industrial Auxiliary Materials: Flame-retardant conveyor belt framework, high-strength FR sewing thread, safety nets, etc.

3. Specifications & Physical/Mechanical Properties

Specification (Denier)	Breaking Strength (N)	Length per kg (m/kg)	Approx. Diameter (mm)	Elongation at Break (%)	Dry Heat Shrinkage (%)	LOI (%)
500	≥ 42	18,000	0.25	≤ 14	≤ 8	≥ 32
840	≥ 70	10,714	0.32	≤ 14	≤ 8	≥ 32
1000	≥ 83	9,000	0.35	≤ 14	≤ 8	≥ 32
1300	≥ 108	7,143	0.4	≤ 14	≤ 8	≥ 32
1500	≥ 125	6,000	0.42	≤ 14	≤ 8	≥ 32
2000	≥ 167	4,500	0.5	≤ 14	≤ 8	≥ 32

Note 1: 1 D = 1.111 dtex. Dry heat shrinkage test condition: 177°C × 30 min.

Note 2: Breaking strength estimated based on high-tenacity polyester monofilament strength ≥ 7.5 cN/dtex (8.5 g/D); actual value subject to measurement.

4. Flame Retardant Properties

Property	Unit	Specification	Remarks
Limiting Oxygen Index (LOI)	%	≥ 32	Excellent flame retardancy
Flame Rating	—	V-2 (UL94)	Higher ratings customizable
Halogen Content	—	Halogen-free	Eco-friendly flame retardant
Smoke Emission	—	Low smoke	Meets low-smoke requirements

5. Electrical Performance

Property	Unit	Specification	Remarks
Volume Resistivity	Ω·cm	≥ 1 × 10 ¹⁴	Excellent electrical insulation

6. Temperature Resistance

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +130°C	Continuous working temperature
Short-Term Temperature Resistance	150°C	Short-term withstand
Chemical Resistance	Good	Resistant to weak acids, weak bases, and most solvents
Light & Weather Resistance	Excellent	Good UV resistance
Abrasion Resistance	Good	Suitable for dynamic bending applications
Low Moisture Absorption	≤ 0.4%	Moisture regain under standard atmosphere

7. Other Characteristics

Appearance / Color: Natural (translucent) or custom colors. Surface: smooth and uniform; free from impurities and oil stains.

Flame-Retardant Characteristics: Self-extinguishing upon removal from flame; stable flame retardancy; LOI ≥ 32%; meets flame-retardant standards such as IEC 60332.

Processing Performance: Supports slitting, winding, and braiding; suitable for high-speed braiding machines and cabling machines; twist customizable per customer requirements.

8. Packaging & Storage

Paper Tube Specifications:

Tall tube: 270 mm (height) × 220 mm (OD) × 94 mm (ID)

Short tube: 220 mm (height) × 250 mm (OD) × 127 mm (ID)

Net Weight: 8–15.0 kg per tube depending on denier specification (negotiable); 16 tubes/layer, 4 layers/pallet.

Outer Packaging: Lined with moisture-proof film; outer carton or plastic film wrapping for firm protection.

Storage: Store in a cool, dry, ventilated warehouse; avoid direct sunlight; keep away from heat sources and chemicals.

Shelf Life: 18 months from production date under specified packaging and storage conditions.

High-Tenacity Nylon Filament Yarn

1. Product Overview

Product Name: High-Tenacity Nylon Filament Yarn

Material: PA6

Product Models: Expressed in Denier (D), ranging from 210D to 3000D; other special specifications customizable.

Description: Made from premium polyamide chips via advanced melt spinning and strengthening processes. Specifically designed for the wire and cable industry. Combines ultra-high strength, excellent fatigue resistance, outstanding elasticity, stable heat resistance, and excellent abrasion resistance. Also features high color fastness, low coefficient of friction, good electrical insulation, non-toxic and odorless properties, and excellent weather resistance. An ideal material balancing high performance, easy processing, and long-term reliability.

Main Function: Used for core gap filling of wires and cables (providing support, cushioning, and ensuring a round cable body) and outer braiding reinforcement (providing high tensile, torsion, and abrasion resistance mechanical protection, and assisting shielding and appearance enhancement).



2. Main Application Areas

Cable Filling: Cabling filler material for power cables, control cables, and communication cables.

Cable Braiding:

Reinforcement Protective Layer: Outer braiding reinforcement layer for robot cables, drag chain cables, rubber-sheathed cables, and specialty equipment cables.

Shielding Auxiliary Layer: Mixed braiding with metal wires to form a composite shielding layer.

Identification & Appearance: Colored yarn braiding for appearance identification.

Industrial Auxiliary Materials: For manufacturing high-strength ropes, lifting slings, industrial fabrics, etc.

3. Specifications & Physical/Mechanical Properties

Specification (Denier)	Length per kg (m/kg)	Approx. Diameter (mm)	Breaking Strength (≥)	Elongation at Break	Thermal Shrinkage (≤)	Oil Content (≤)
210D	42857	0.16	6.80 g/D	26 ± 4%	9.60%	1.00%
300D	30000	0.19	6.80 g/D	26 ± 4%	9.60%	1.00%
420D	21429	0.23	6.80 g/D	26 ± 4%	9.60%	1.00%
540D	16667	0.26	6.80 g/D	26 ± 4%	9.60%	1.00%
630D	14286	0.28	6.80 g/D	26 ± 4%	9.60%	1.00%
840D	10714	0.32	6.80 g/D	26 ± 4%	9.60%	1.00%
1000D	9000	0.35	6.80 g/D	26 ± 4%	9.60%	1.00%
1260D	7143	0.4	6.80 g/D	26 ± 4%	9.60%	1.00%
2000D	4500	0.5	6.80 g/D	26 ± 4%	9.60%	1.00%
3000D	3000	0.61	6.80 g/D	26 ± 4%	9.60%	1.00%

4. Other Characteristics

Property	Remarks
Fatigue Resistance	Excellent; withstands long-term dynamic bending and tensile cycles.
Elasticity & Recovery	Good; effectively cushions external forces and protects the cable core.
Color Fastness	High; color remains durable after braiding; not easy to fade.
Heat Resistance	Good; long-term service temperature -40°C ~ +120°C; higher short-term temperature resistance.
Coefficient of Friction	Low; smooth processing; low equipment wear.
Abrasion Resistance	Excellent; significantly extends cable service life in harsh environments.
Electrical Insulation	Good; high volume resistivity; suitable as part of an insulation system.
Safety & Eco-Friendly	Non-toxic and odorless; meets environmental requirements.
Weather Resistance	Good; strong UV and environmental aging resistance.
Color	Standard white; other colors customizable upon request.

5. Packaging & Storage

Paper Tube Specifications:

Tall tube: 250 mm (height) × 140 mm (OD)

Short tube: 125 mm (height) × 140 mm (OD)

Net Weight: 8–15.0 kg per tube depending on denier specification (negotiable); 16 tubes/layer, 4 layers/pallet.

Outer Packaging: Lined with moisture-proof film; outer carton or plastic film wrapping for firm protection.

Storage: Store in a cool, dry, ventilated warehouse; avoid direct sunlight; keep away from heat sources and chemicals.

Shelf Life: 24 months from production date under specified packaging and storage conditions.

PP High-Tenacity Yarn

1. Product Overview

Product Name: PP High-Tenacity Yarn (High-Tenacity Polypropylene Filament Yarn)

Material: Polypropylene (PP) resin

Process: Melt spinning + high-ratio drawing + heat setting

Description: Made from premium polypropylene resin via melt spinning, high-ratio drawing, and heat setting. Features low specific gravity, high strength, acid and alkali resistance, abrasion resistance, non-hygroscopicity, and low thermal shrinkage. PP is the lightest known industrial fiber (0.91 g/cm³), can float on water, offers high strength (up to above 8 g/D), low elongation, and good dimensional stability.

Main Function: Used for core filling, tensile reinforcement layers, braided shielding layers, and cable binding of wires and cables, as well as industrial filter cloth, ropes, safety nets, lifting slings, conveyor belts, etc.



2. Main Application Areas

Wires & Cables: Filling and binding yarn for communication cables and optical cables; braided shielding layers and tensile reinforcement layers

Industrial Filter Cloth: Filtration fabrics for metallurgy, mineral processing, chemicals, food, and environmental protection

Ropes & Cords: Ropes and cords for construction, transportation, agriculture, fishery, and sports

Safety Protection: Safety belts, safety nets, lifting slings

Geotextiles: Woven geotextiles, flexible container bags, tarpaulins

Fire Hoses: Inner and outer braiding of high-pressure fire hoses

Sewing Thread: Sewing of cement bags, fertilizer bags, and woven bags

3. Specifications & Physical/Mechanical Properties

Specification (Denier)	Linear Density (dtex)	Length per kg (m/kg)	Approx. Diameter (mm)	Breaking Strength (N)	Elongation at Break (%)	Thermal Shrinkage (%)	Oil Content (%)
500D	555	18000	0.24	≥ 32.5	15~25	≤ 6	0.8~1.2
1000D	1111	9000	0.34	≥ 65.0	15~25	≤ 6	0.8~1.2
1500D	1667	6000	0.42	≥ 97.5	15~25	≤ 6	0.8~1.2
2000D	2222	4500	0.48	≥ 130	15~25	≤ 6	0.8~1.2
3000D	3333	3000	0.59	≥ 195	15~25	≤ 6	0.8~1.2
5000D	5555	1800	0.76	≥ 325	15~25	≤ 6	0.8~1.2

Note 1: Length per kg (m/kg) = 9,000,000 / D, where D is denier. The above are standard specifications. Other specifications from 150D to 5000D are customizable.

Note 2: Approx. diameter (mm) $\approx 0.0105 \times \sqrt{D}$, an empirical formula. Actual value is affected by twist and process.

Note 3: Breaking strength estimated based on typical high-tenacity PP yarn strength ≥ 6.5 g/D (approx. 5.8 cN/dtex). High-tenacity PP yarn strength generally ranges from 5–8 g/D; high specifications can reach above 8.5 g/D. Thermal shrinkage test condition: 120°C × 30 min.

4. General Properties

Property	Unit	Specification	Remarks
Density	g/cm ³	0.91	Lightest among known industrial fibers; floats on water
Long-Term Service Temperature	°C	-40 ~ +90	—
Short-Term Temperature Resistance	°C	120	—
Melting Point	°C	165 ~ 175	—
Acid & Alkali Resistance	—	Excellent	Superior to polyester and nylon
Moisture Resistance	—	Almost non-hygroscopic	Moisture regain $\approx 0.1\%$; wet/dry strength ratio 100%
Abrasion Resistance	—	Good	—
Seawater Corrosion Resistance	—	Excellent	Suitable for marine environments

5. Other Characteristics

Appearance / Color: Natural (white) or custom colors. Surface: smooth and uniform; free from impurities and oil stains.

Product Advantages: Lightest specific gravity; high strength; chemical corrosion resistance; non-hygroscopic; good abrasion resistance; low thermal shrinkage; anti-aging.

Processing Performance: Supports slitting, twisting, and braiding; suitable for high-speed braiding machines and cabling machines; twist direction (S or Z) customizable; available as intermingled yarn, double-twisted yarn, twisted yarn, etc.

6. Packaging & Storage

Paper Tube Specifications:

Tall tube: 250 mm (height) × 140 mm (OD)

Short tube: 125 mm (height) × 140 mm (OD)

Net Weight: 8–15.0 kg per tube depending on denier specification (negotiable); 16 tubes/layer, 4 layers/pallet.

Outer Packaging: Lined with moisture-proof film; outer carton or plastic film wrapping for firm protection.

Storage: Store in a cool, dry, ventilated warehouse; avoid direct sunlight; keep away from heat sources and chemicals.

Shelf Life: 18 months from production date under specified packaging and storage conditions.

Aramid Filament Yarn

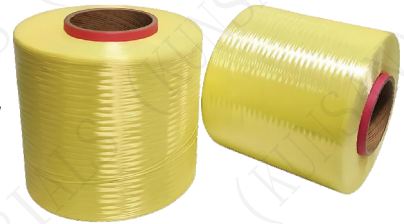
1. Product Overview

Product Name: Aramid Filament Yarn (Para-aramid); also known as Bulletproof Yarn or Kevlar

Material: Poly(p-phenylene terephthalamide) (PPTA)

Product Models: Denier (D), covering 200D–3000D; other special specifications customizable.

Description: Made from high-performance para-aramid (PPTA) via liquid crystal spinning, twisting, and setting. Features ultra-high strength, high modulus, inherent flame retardancy, high-temperature resistance, chemical corrosion resistance, and excellent impact and fatigue resistance. Specific strength is 5–6 times that of high-quality steel wire, while density is only 1/5 of steel. After twisting, the bundle structure is tighter and mechanical performance transfer is more effective, suitable for load-bearing and protective applications requiring extremely high reliability.



Main Function: Used as load-bearing strength members and tensile braiding layers for high-end wires and cables, as well as bulletproof and cut-resistant materials, high-strength ropes, and composite reinforcements in specialty equipment.

2. Main Application Areas

Specialty Cables: Strength members for OPGW, submarine cables, drag chain cables, elevator cables, and mining cables

High-Temperature and Fire-Resistant Cables: Reinforcement skeleton for high-temperature insulation systems

Safety Protection: Cut-resistant gloves, bulletproof vests, armored composites

Industrial and Aerospace: High-strength ropes, parachute cords, composite reinforcing fibers

3. Specifications & Physical/Mechanical Properties

Specification(Denier)	Unit	200D	400D	600D	840D	1000D	1500D	3000D
Linear Density	dtex	220	440	660	930	1100	1670	3340
Filament Count (F)	—	133	267	267	267	267	267	267
Typical Twisted Diameter	mm	0.05	0.1	0.15	0.2	0.25	0.3	0.5
Breaking Strength (≥)	cN/dtex	20	20	20	20	20	20	20
Elongation at Break (≥)	%	3	3	3	3	3	3	3
Initial Modulus (≥)	GPa	88	88	88	88	88	88	88
Full Bobbin Net Weight	kg	2	2	5	5	5	5	5

Key Parameters:

- Unit Conversion: 1 dtex = 0.9 D. Table specifications are expressed in D; core design parameters are based on dtex.
- Strength and Force: Breaking strength ≥ 20 cN/dtex. Minimum breaking force can be calculated; e.g., 440 dtex = 20 cN/dtex $\times$ 440 dtex = 8800 cN = 88 N.
- Filament Count (F): Common configuration; adjustable according to spinning process.
- Diameter: Typical value at specific twist; for reference only. Actual diameter is affected by twist, tension, and measurement method.
- Test Conditions: Standard laboratory conditions (23 $\pm$ 2°C, 50 $\pm$ 5% RH).

4. General Properties

Property	Specification	Remarks
Long-Term Heat Resistance	-60°C ~ +200°C	Excellent heat resistance; does not melt at high temperature; dimensional stability
Limiting Oxygen Index (LOI)	$\geq 28\%$	Inherently flame retardant; self-extinguishing
Density	1.44 g/cm ³	Lightweight and high strength
Thermal Decomposition Temperature	$\approx 500^\circ\text{C}$	—
Chemical Resistance	Excellent	Resistant to most organic solvents and oils; limited stability to strong acids and bases
Weather Resistance	Good	UV protection required for prolonged exposure
Fatigue Resistance	Excellent	Withstands repeated bending and tension
Electrical Insulation	Good	High volume resistivity

5. Packaging & Storage

Packaging: Cheese (straight tube); full bobbin net weight as above.

Core Spec: 250 mm (height) $\times$ 140 mm (OD).

Outer Packaging: Moisture-proof and dust-proof sealed packaging.

Storage: Cool, dry, dark, well-ventilated environment. Keep away from acids, bases, and other chemicals.

Shelf Life: 24 months from production date under specified packaging and storage conditions.

Water-Blocking Yarn

1. Product Overview

Product Name: Water-Blocking Yarn (Water-Swellable Yarn)

Material: Polyester fiber substrate + water-swellable polymer resin

Process: Impregnation / coating

Description: A functional water-blocking yarn made with high-strength polyester fiber as the substrate, combined with water-swellable polymer resin via a special process. In dry state, it maintains good mechanical strength and processability. Upon contact with water, the resin rapidly absorbs water and expands to form a dense gel, effectively blocking longitudinal and radial water penetration paths inside cables. The expanded gel is stable, does not dissolve or migrate, ensuring long-term water-blocking reliability.

Main Function: Used for cable core water blocking, conductor water blocking, and metallic sheath water blocking of communication optical cables and power cables. Prevents insulation degradation or signal attenuation caused by water ingress.



2. Main Application Areas

Communication Optical Cables: Cable core water blocking for stranded loose tube and central tube optical cables

Power Cables: Conductor water-blocking layer and insulation screen water-blocking layer for MV/HV XLPE cables

Submarine Cables: Water-blocking cables for marine engineering

Mining Cables: Longitudinal waterproofing in wet environments

Oil Platform Cables: Specialty water-blocking cables for offshore oil and gas platforms

3. Specifications & Physical/Mechanical Properties

Specification (Denier)	Approx. Diameter (mm)	Linear Density (m/kg)	Expansion Speed (≥, ml/g/min)	Expansion Ratio (≥, ml/g/5min)	Moisture Content (≤, %)	Tensile Strength (≥, N)	Elongation (≥, %)
200	0.14	45000 ± 10%	18	22	3	8	10
450	0.21	20000 ± 10%	22	26	3.1	14	11
600	0.24	15000 ± 10%	25	30	3.2	20	12
900	0.3	10000 ± 10%	25	30	3.3	28	12
1200	0.34	8000 ± 10%	32	42	3.3	28	12
1500	0.39	6000 ± 10%	35	45	3.3	60	12
1800	0.42	5000 ± 10%	40	50	3.3	70	12
2000	0.45	4500 ± 10%	45	55	3.8	80	12
2250	0.47	4000 ± 10%	48	58	3.8	80	12
2500	0.51	3500 ± 10%	50	60	3.8	100	11
3000	0.55	3000 ± 10%	50	60	3.8	110	12
4500	0.67	2000 ± 10%	55	65	3.8	150	12
9000	0.95	1000 ± 10%	55	65	3.8	300	12
18000	1.34	500 ± 10%	55	65	3.8	400	12
25700	1.6	350 ± 10%	55	65	3.8	600	12

4. Water Resistant Properties

Property	Definition	Typical Significance
Expansion Speed	Volume expansion per unit weight of yarn in deionized water within initial 1 minute (ml/g/min)	Indicates rapid response capability upon water contact
Expansion Ratio	Volume expansion per unit weight of yarn in deionized water within 5 minutes (ml/g/5min)	Measures sealing effect after full expansion

5. Temperature Resistance

Property	Specification	Remarks
Long-Term Service Temperature	-40°C ~ +100°C	—
Short-Term Temperature Resistance	230°C	Withstands high temperature during extrusion
Chemical Stability	Good	Resistant to weak acids, weak bases, cable oil, and filling compounds
Compatibility	Good	Compatible with polyolefin-based and petrolatum-based filling compounds; no adverse reaction

6. Other Characteristics

Appearance: Flat surface; uniform fiber distribution.

Color: White (standard).

Free from impurities, oil stains, and mechanical damage.

Flexibility: Good; easy to wrap and fill.

Stability After Expansion: Gel remains stable after water absorption and expansion; does not dissolve or migrate; ensures long-term water-blocking reliability.

7. Packaging & Storage

Packaging: Spool or cheese packaging; sealed in moisture-proof plastic bag; fixed with carton or woven bag.

Paper Tube Specifications:

Tall tube: 270 mm (height) × 220 mm (OD) × 94 mm (ID)

Short tube: 220 mm (height) × 250 mm (OD) × 127 mm (ID)

Storage: Store in a cool, dry, ventilated warehouse; avoid direct sunlight and heat sources. Use as soon as possible after opening.

Shelf Life: 12 months from production date.

Bulked Continuous Filament PP Yarn

1. Product Overview

Product Name: Polypropylene PP Yarn (Bulked Continuous Filament Polypropylene Yarn)

Material: Polypropylene (PP) homopolymer resin

Process: Bulking texturing (spinning + drawing + bulking texturing)

Description: Made from fiber-grade PP homopolymer resin via BCF spinning. The bulking texturing process uses hot air to create a three-dimensional crimp structure, giving the yarn excellent bulk, soft hand, high coverage, and good resilience. Features lightweight, non-hygroscopic, chemical corrosion resistance, and mildew resistance.

Main Function: Bulked yarn material for carpets, ropes, cable filling, industrial fabrics, etc.



2. Main Application Areas

Carpet Manufacturing: Face yarn for various carpets

Automotive Interiors: Automotive carpets and interior fabrics

Industrial Ropes: High-strength ropes and cables

Packaging Materials: Various packaging ropes and tapes

Cable Filling: Lightweight filler for specialty cables

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6
Specification	Denier	600D	1200D	1800D	2400D	3000D	3600D
Filament Count (F)	—	40	80	100	120	150	180
Length per kg	m/kg	15000	7500	5000	3750	3000	2500
Breaking Strength (≥)	N	12	18	24	30	36	72
Hot Crimp Elongation (≥)	%	30	30	30	30	30	30
Boiling Water Shrinkage (≤)	%	2	2	2	2	2	2

Note: D (denier) = grams per 9000 m; F = filament count.

4. Process Parameters

Parameter	Unit	Recommended Value
Spinning Temperature	°C	230–290
Side Blowing Air Temperature	°C	15
Side Blowing Air Speed	m/min	1.0–1.2
Side Blowing Air Humidity	%	50–70

5. Other Characteristics

Appearance:

Color: Natural (colorless translucent) / dyed customizable

Surface: Three-dimensional crimp structure; bulky and soft

Physical Properties:

Excellent Bulk: Bulking texturing provides natural crimp and high coverage

Lightweight: PP density approx. 0.90–0.91 g/cm³; does not increase finished product weight

Non-Hygroscopic: Strength unaffected by moisture

Good Resilience: Excellent recovery after compression

Chemical Properties:

Chemical Corrosion Resistance: Good resistance to acids, bases, and solvents

Mildew Resistance: Does not support mold growth; stable long-term performance

UV Resistance: UV stabilizers can be added to enhance weather resistance

Environmental Performance: RoHS/REACH compliant; non-toxic and eco-friendly

6. Packaging & Storage

Packaging:

Tube: paper or plastic tube

Roll: woven bag or carton

Core Specification: 76 mm × 290 mm (customizable)

Weight per Spool: Approx. 3.4 kg/spool (negotiable)

Storage: Cool, dry, clean warehouse; avoid direct sunlight and chemical contact

Shelf Life: 12 months from production date

Glass Fiber Yarn

1. Product Overview

Product Name: Glass Fiber Yarn (Fiberglass Yarn)

Material: E-Glass fiber / C-Glass fiber

Process: Twistless process; continuous filament bundle directly gathered

Description: Made from premium E-glass fiber via a twistless process in which continuous filament bundles are directly gathered. Features parallel fiber arrangement, good bulk, excellent softness, no twist, and no fuzzing. The twistless design provides better filling performance and bulk, especially suitable for cable filling applications requiring high softness.

Main Function: Used for core gap filling and structural reinforcement of flame-retardant cables, fire-resistant cables, and halogen-free low-smoke cables. Increases cable tensile strength and stabilizes the relative position of insulated cores.



2. Main Application Areas

Flame-Retardant / Fire-Resistant Cables: Core filling for various flame-retardant and fire-resistant cables

Motors & Electrical Appliances: Binding and insulation material for motors, transformers, and electrical appliances

High-Temperature Cables: Cables for metallurgy, petrochemical, and other high-temperature applications

Power Cables: Structural filling and reinforcement for MV/HV power cables

Fire/Oxygen Barrier Cables: Special cable structures requiring isolation from fire sources or oxygen

Composite Reinforcement: Reinforcement material for FRP products

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7	Spec 8	Spec 9	Spec 10	Spec 11	Spec 12
Diameter	mm	0.2	0.24	0.35	0.45	0.5	0.65	0.8	0.95	1.25	1.4	2	2.8
Diameter Tolerance	mm	±0.05	±0.05	±0.05	±0.05	±0.08	±0.10	±0.10	±0.12	±0.15	±0.15	±0.20	±0.25
Linear Density	tex	68	100	200	300	400	600	900	1200	2000	2400	4800	9600
Breaking Strength (≥)	N	10	15	30	45	60	85	120	160	260	310	550	1000
Reference Weight ±10%	g/m	0.068	0.10	0.20	0.30	0.40	0.60	0.90	1.20	2.00	2.40	4.80	9.60
Oxygen Index	%	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70
Ignition Loss	%	≤0.7	≤0.7	≤0.7	≤0.7	≤0.7	≤0.7	≤0.7	≤0.7	≤0.7	≤0.7	≤0.7	≤0.7

Note 1: The above specifications refer to common industry standards. Other specifications customizable upon request.

Note 2: Tex = D/9. Linear density (tex) is the weight in grams of 1000 m of yarn. Products in the range of 200–9600 tex available upon request.

Note 3: E-glass fiber alkali metal oxide content ≤0.8%; C-glass fiber content 8–12%.

4. Other Characteristics

Appearance: Color: white (standard). Surface: smooth and uniform; free from impurities and oil stains. Full roll is splice-free for improved production efficiency.

Physical Properties:

Excellent High-Temperature Resistance: Long-term service temperature up to 550–650°C; higher short-term temperature resistance.

Strong Flame Retardancy: Oxygen index ≥70%, far exceeding ordinary materials; self-extinguishing upon removal from flame.

High Tensile Strength: Breaking strength increases with diameter, meeting filling requirements of different cable structures.

Dimensional Stability: Low thermal shrinkage; stable dimensions during processing and use.

Electrical Properties:

Excellent Insulation: High volume resistivity; dielectric constant approx. 3.9.

Good Voltage Withstand: Suitable for cable insulation structures.

Chemical Properties:

Good Corrosion Resistance: Excellent acid, alkali, and salt spray resistance.

Halogen-Free & Eco-Friendly: Halogen-free; no smoke during combustion; meets environmental and safety requirements.

Non-Hygroscopic: Strength unaffected by moisture; ensures stable cable structure.

5. Packaging & Storage

Packaging:

Coreless: ID 160 ± 5 mm; height 260 ± 5 mm; OD 280 mm: 17 kg/small roll; OD 310 mm: 23 kg/large roll

Inner Packaging: Plastic film bag

Outer Packaging: Carton or woven bag

Storage: Store in a cool, dry, clean warehouse; avoid direct sunlight and contact with chemicals.

Shelf Life: 12 months from production date.

Fiberglass Filler Yarn

1. Product Overview

Product Name: Fiberglass Filler Yarn (Glass Fiber Filler)

Material: E-glass fiber

Process: Twistless continuous filament yarn (bundle) mechanically twisted, with paraffin emulsion as sizing agent

Description: Made from premium E-glass fiber via surface treatment and specialized mechanical plying/twisting. Features high-temperature resistance, strong flame retardancy, high oxygen index, halogen-free, and no smoke emission. Sizing agent content $\leq 5\%$, ensuring stable physical and chemical properties under high-temperature environments.

Main Function: Used as filler for flame-retardant cables, fire-resistant cables, halogen-free low-smoke flame-retardant cables, and fire/oxygen barrier cables. Ensures good cable roundness, improves cable flame-retardant rating, stabilizes the relative position of insulated cores, and increases cable tensile strength.



2. Main Application Areas

Flame-Retardant / Fire-Resistant Cables: Core filling for various flame-retardant and fire-resistant cables

Specialty Cables: Mining cables, marine cables, and rail transit cables

Halogen-Free Low-Smoke Cables: Filler material for eco-friendly cables

Fire/Oxygen Barrier Cables: Special cable structures requiring isolation from fire sources or oxygen

High-Temperature Cables: Cables for metallurgy, petrochemical, and other high-temperature applications

3. Specifications & Physical/Mechanical Properties

Diameter (mm)	Tolerance (mm)	Ply	Linear Density (tex)	Breaking Strength (N)	Twist (turns/m)	Weight (g/m)	Oxygen Index (%)	Ignition Loss (%)
0.2	± 0.02	3	150	94	280	$0.15 \pm 10\%$	≥ 70	≤ 0.7
0.3	± 0.025	4	200	104	280	$0.20 \pm 10\%$	≥ 70	≤ 0.7
0.5	± 0.05	4	540	92	140	$0.54 \pm 10\%$	≥ 70	≤ 0.7
0.7	± 0.07	4	900	114	130	$0.90 \pm 10\%$	≥ 70	≤ 0.7
1.0	± 0.10	4	1350	159	125	$1.35 \pm 10\%$	≥ 70	≤ 0.7
1.2	± 0.12	4	1700	173	120	$1.70 \pm 10\%$	≥ 70	≤ 0.7
1.5	± 0.15	4	2600	206	110	$2.60 \pm 10\%$	≥ 70	≤ 0.7
2.0	± 0.20	4	3700	241	110	$3.70 \pm 10\%$	≥ 70	≤ 0.7
2.5	± 0.25	4	4500	273	100	$4.50 \pm 10\%$	≥ 70	≤ 0.7
3.0	± 0.30	4	6000	301	90	$6.00 \pm 10\%$	≥ 70	≤ 0.7

Note 1: Linear density (tex) = weight in grams per 1000 m; 1 tex = 1 g/1000 m.

Note 2: The above specifications refer to common industry standards. Other specifications customizable upon request.

4. Temperature Resistance

Property	Unit	Specification	Remarks
Oxygen Index	%	≥ 70	Excellent flame retardancy
Ignition Loss	%	≤ 5	Sizing agent content control
Halogen Content	—	Halogen-free	Eco-friendly product
Smoke Emission	—	No smoke	Meets low-smoke requirements
Long-Term Service Temperature	$^{\circ}\text{C}$	550 ~ 650	—
Short-Term Temperature Resistance	$^{\circ}\text{C}$	800 ~ 1000	Withstands higher temperature for short periods

5. Other Characteristics

Appearance / Color: White (standard).

Surface: Smooth and uniform; free from impurities and oil stains. Full roll is splice-free for improved production efficiency.

Chemical Resistance: Excellent acid, alkali, and salt spray resistance; suitable for chemical and marine corrosive environments.

Insulation Performance: High resistivity; good electrical insulation.

Processing Performance: Good yarn evenness; suitable for high-speed cabling. Twist level customizable per customer requirements. Non-hygroscopic; ensures stable cable structure.

6. Packaging & Storage

Packaging:

Tube: paper or plastic tube

Roll: woven bag or carton

Core Specification: Customizable (38 mm, 52 mm, 76 mm, etc.)

Weight per Spool: 4–8 kg/spool (negotiable)

Storage: Store in a cool, dry, clean warehouse; avoid direct sunlight and contact with chemicals.

Shelf Life: 18 months from production date.

Flame Retardant Rock Wool Filler Yarn

1. Product Overview

Product Name: Flame Retardant Rock Wool Filler Yarn

Material: Inorganic mineral fiber produced from natural rock/minerals via high-temperature melting and spinning

Process: Rock wool fiber twisting and plying

Description: Made from natural rock and minerals through high-temperature melting and spinning into inorganic mineral fiber, then refined by twisting and plying. As an inorganic silicate fiber, it is non-combustible, high-temperature resistant, halogen-free, and low-smoke. The pure natural material is eco-friendly, emits no corrosive or toxic substances during combustion, and produces only a small amount of smoke, meeting halogen-free low-smoke flame-retardant requirements.

Main Function: Used for core gap filling of flame-retardant and fire-resistant cables. Improves cable flame-retardant rating, stabilizes the relative position of insulated cores, and increases cable tensile strength.



2. Main Application Areas

Flame-Retardant / Fire-Resistant Cables: Core filling for various flame-retardant and fire-resistant cables

Marine Cables: Flame-retardant cables for ships and marine engineering

Power Cables: Structural filling and reinforcement for MV/HV power cables

High-Temperature Cables: Cables for metallurgy, petrochemical, and other high-temperature applications

Mining Cables: Filler material for cables in coal mines and other specialty environments

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7	Spec 8	Spec 9	Spec 10	Spec 11
Diameter	mm	2	3	4	5	6	8	10	12	14	16	18
Weight per Meter ±10%	g/m	7	9	15.3	18.5	25.5	40	58	86	120	155	206
Oxygen Index	%	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70
Ignition Loss	%	≤22	≤22	≤22	≤22	≤22	≤22	≤22	≤22	≤22	≤22	≤22
Breaking Strength	N	≥30	≥45	≥60	≥80	≥100	≥140	≥180	≥220	≥260	≥300	≥340
Moisture Content	%	≤2.0	≤2.0	≤2.0	≤2.0	≤2.0	≤2.0	≤2.0	≤2.0	≤2.0	≤2.0	≤2.0

4. Flame Retardant Properties

Property	Unit	Specification	Remarks
Limiting Oxygen Index	%	≥70	Far exceeding conventional flame-retardant requirements
Ignition Loss	%	≤22	700–800°C × 30 min
Halogen Content	—	Halogen-free	Meets halogen-free requirements
Smoke Emission	—	Low smoke	Produces a small amount of smoke during combustion
Corrosivity	—	Non-corrosive	No corrosive gas during combustion
Toxicity	—	Non-toxic	No toxic gas during combustion

5. Temperature Resistance

Property	Specification	Remarks
Long-Term Service Temperature	-60°C ~ +650°C	Continuous working temperature
Short-Term Temperature Resistance	1000°C	Withstands higher temperature for short periods
Material Characteristics	Inorganic silicate fiber	Made from natural rock and minerals
Environmental Compliance	RoHS / REACH	Pure natural material; eco-friendly

6. Other Characteristics

Appearance / Color: Grayish white / light yellow (standard); free from stains, missing plies, extra plies, broken ends, and knots.

Surface: Uniform fiber distribution; free from severe stains and mechanical damage. Full roll is break-free for improved production efficiency.

Material Characteristics: Pure natural mineral material; eco-friendly and renewable. Non-combustible; excellent high-temperature resistance. Halogen-free, low-smoke, non-corrosive, and non-toxic.

Processing Performance: Uniform fiber; suitable for high-speed cabling. Diameter and twist customizable per customer requirements.

7. Packaging & Storage

Packaging: Tube or spool packaging available upon request.

Inner Packaging: Each tube wrapped with plastic film.

Outer Packaging: Several tubes packed in woven bags according to customer and practical requirements.

Storage: Store in a clean, dry warehouse.

Transportation: Avoid throwing, dropping, and heavy object compression; strictly protect from rain.

Shelf Life: 12 months from production date.

Kraft Paper Filler Yarn

1. Product Overview

Product Name: Kraft Paper Filler Yarn

Material: Premium kraft paper (virgin wood pulp)

Process: Paper tape slitting + twisting and plying

Description: Made from premium virgin wood pulp kraft paper via paper tape slitting and multi-ply twisting. Features good softness, light weight, good tensile strength, temperature resistance, non-toxicity, and eco-friendliness. High-tenacity polyester filament can be added to enhance breaking force according to customer requirements. Smooth surface and uniform thickness make it an ideal eco-friendly filler material for wires and cables.

Main Function: Used for core gap filling, structural reinforcement, and tensile strength improvement of wires and cables. Makes cable structure round and stable, and increases cable tensile strength.

2. Main Application Areas

Wires & Cables: Eco-friendly filler material for various cables

Crafts: Hand weaving and craft production

Steel Wire Rope Core: Hemp core material for steel wire ropes

Bundling: Industrial bundling and packaging fixing

Shopping Bags: Eco-friendly shopping bag handles

Textile Fabrics: Auxiliary material for the textile industry

3. Specifications & Physical/Mechanical Properties

Specification (Diameter)	Length per kg (m/kg)	Weight per Roll (kg)	Breaking Force (N)	Elongation (%)	Moisture Content (%)
0.8 mm	1100	2 ~ 5	≥ 15	≤ 8	≤ 10
1.5 mm	800	2 ~ 5	≥ 30	≤ 8	≤ 10
2.0 mm	360	2 ~ 8	≥ 50	≤ 8	≤ 10
2.5 mm	280	2 ~ 8	≥ 70	≤ 8	≤ 10
3.0 mm	200	2 ~ 8	≥ 90	≤ 8	≤ 10

Note 1: The above are standard specifications. Other diameter specifications are customizable upon request.

Note 2: High-tenacity polyester filament can be added upon request to improve breaking force.

4. Other Characteristics

Appearance:

Color: Yellow (standard)

Surface: Smooth and uniform; free from impurities and oil stains

Material Properties:

Natural plant fiber; eco-friendly and renewable

Lightweight; does not increase cable weight

Strong flexibility; stable structure after filling

Good temperature resistance; non-toxic and pollution-free

Processing Performance:

Good softness; easy to fill and process

Twisting available upon customer request

Uniform thickness; suitable for high-speed cabling

5. Packaging & Storage

Packaging: Woven bag or carton

Roll Form: Different roll forms available upon customer request

Storage: Store in a cool, dry, clean warehouse; avoid direct sunlight and moisture

Shelf Life: 12 months from production date



PE Monofilament

1. Product Overview

Product Name: PE Monofilament (Polyethylene Monofilament)

Material: High-density polyethylene (HDPE)

Process: Melt spinning + high-ratio drawing + heat setting

Description: Made from monofilament-grade HDPE resin via melt spinning, high-ratio drawing, and heat setting into a single solid fiber. Features high strength, low specific gravity, good abrasion resistance, acid and alkali resistance, non-hygroscopicity, and dimensional stability. Also offers excellent low-temperature performance (minimum service temperature down to -70 ~ -100°C), good chemical stability, and excellent electrical insulation.

Main Function: Used for braided shielding layers, tensile reinforcement layers, and core filling of wires and cables, as well as monofilament materials for fishing nets, industrial filter cloth, ropes, etc.



2. Main Application Areas

Wires & Cables: Cable braided shielding layers, tensile reinforcement layers, core filling

Ropes: Industrial ropes, bundling ropes

Fishing Nets: Various fishing net lines (suitable for 0.16–0.24 mm diameter fishing monofilament)

Textiles: Warp and weft yarns in technical fabrics

Industrial Filter Cloth: Filtration fabrics, screen printing fabrics

Civilian Monofilament: Window screen yarn and other civilian applications

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7	Spec 8	Spec 9	Spec 10
Diameter	mm	0.15	0.2	0.25	0.3	0.35	0.4	0.5	0.6	0.8	1
Titer	D	200	350	550	800	1100	1400	2200	3200	5700	8900
Breaking Strength (≥)	N	4	6.5	9.5	14	18	23	34	45	70	100
Elongation at Break (≤)	%	20	20	20	20	20	20	20	20	20	20
Knot Strength (≥)	N/tex	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
Density	g/cm ³	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95

Note 1: Production specification range 0.08–2.00 mm (60–32000 D). Colors adjustable per customer requirements.

Note 2: Titer (D) = weight in grams per 9000 m. The theoretical calculation formula: $D = 2250 \times \pi \times d^2 \times \rho$, where d = diameter in mm and ρ = density in g/cm³. Titer values in the table are nominal; actual values shall be based on measured linear density.

4. Other Characteristics

Appearance:

Color: Natural (white translucent) / dyed customizable

Surface: Smooth and uniform; free from impurities and obvious indentations

Physical Properties:

High Strength: Excellent tensile strength, meeting various application requirements

Light Specific Gravity: Density approx. 0.95 g/cm³; does not increase finished product weight

Dimensional Stability: Low thermal shrinkage; stable processing dimensions

Good Abrasion Resistance: Smooth surface; excellent abrasion resistance

Excellent Low-Temperature Resistance: Minimum service temperature down to -70 ~ -100°C

Chemical Properties:

Non-Hygroscopic: Insoluble in common solvents at room temperature; low water absorption

Weather Resistance: UV stabilizers can be added to enhance weather resistance

Acid & Alkali Resistance: Good chemical stability; resistant to most acids and bases (not resistant to oxidizing acids)

Electrical Properties: Excellent electrical insulation; high volume resistivity; suitable for cable insulation and shielding structures.

Environmental Performance: Non-toxic and odorless; RoHS/REACH compliant.

5. Packaging & Storage

Packaging:

Spool: plastic or metal spool

Tube: paper or plastic tube

Spool Specification: Core ID customizable (38 mm, 52 mm, 76 mm, etc.); weight per spool 1–5 kg (negotiable)

Outer Packaging: Woven bag or carton

Storage: Store in a cool, dry, clean warehouse; avoid direct sunlight and contact with chemicals

Shelf Life: 12 months from production date

PP Monofilament

1. Product Overview

Product Name: PP Monofilament (Polypropylene Monofilament)

Material: Polypropylene (PP) resin

Process: Melt spinning + drawing and heat setting

Description: Made from fiber-grade polypropylene resin (e.g., S1003 drawing grade) via melt spinning, high-ratio drawing, and heat setting into a single solid fiber.

Features high strength, low specific gravity, good abrasion resistance, acid and alkali resistance, non-hygroscopicity, and dimensional stability. An ideal material for weaving, reinforcement, filtration, and other applications.

Main Function: Used for braided shielding layers, tensile reinforcement layers, and core filling of wires and cables, as well as monofilament materials for industrial filter cloth, ropes, fishing nets, etc.



2. Main Application Areas

Wires & Cables: Cable braided shielding layers, tensile reinforcement layers, core filling

Fishing Nets: Fishing net lines

Industrial Filter Cloth: Filtration materials, screens

Brushes: Industrial brush filaments

Ropes: Industrial ropes, bundling ropes

Textiles: Industrial fabrics

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7	Spec 8	Spec 9	Spec 10	Spec 11
Diameter	mm	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.6	0.8	1
Titer	D	200	350	550	800	1100	1400	1800	2200	3200	5700	8900
Breaking Strength (≥)	N	3.5	6	9	13	18	23	28	34	45	70	100
Elongation at Break (≤)	%	20	20	20	20	20	20	20	20	20	20	20
Thermal Shrinkage (≤)	%	6	6	6	6	6	6	6	6	6	6	6
Density	g/cm ³	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91

Note 1: Titer (D) = weight in grams per 9000 m. The theoretical calculation formula: $D = 2250 \times \pi \times d^2 \times \rho$, where d = diameter in mm and ρ = density in g/cm³. Titer values in the table are nominal; actual values shall be based on measured linear density.

Note 2: Thermal shrinkage test condition: 120°C × 30 min.

4. General Properties

Property	Unit	Typical Value	Test Standard Reference
Density	g/cm ³	0.90 – 0.91	ASTM D1505
Melt Flow Rate (MFR)	g/10min	3.0 – 3.4	ASTM D1238
Tensile Yield Strength	MPa	35 – 36	ASTM D638
Elongation at Break (raw material)	%	>200	ASTM D638
Flexural Modulus	MPa	1400 – 1470	ASTM D790A
Melting Point	°C	160 – 170	DSC method

5. Other Characteristics

Appearance:

Color: Natural (translucent) / dyed customizable

Surface: Smooth and uniform; free from obvious burrs and impurities

Physical Properties:

High Strength: Tensile strength can reach above 560 MPa

Light Specific Gravity: Density only 0.91 g/cm³; does not increase finished product weight

Dimensional Stability: Low thermal shrinkage (≤6%); stable processing dimensions

Good Abrasion Resistance: Smooth surface; excellent abrasion resistance

Chemical Properties:

Acid & Alkali Resistance: Excellent resistance to acids, alkalis, and salts; corrosion resistance ≥96%

Mildew Resistance: Does not support mold growth; stable long-term performance

Weather Resistance: UV stabilizers can be added; after 1000 h xenon lamp aging, strength retention ≥85%

Environmental Performance: RoHS/REACH compliant; non-toxic and eco-friendly; FDA food-contact grade optional

6. Packaging & Storage

Packaging:

Spool: plastic or metal spool

Tube: paper or plastic tube

Spool Specification: Core ID customizable (38 mm, 52 mm, 76 mm, etc.); weight per spool 1–5 kg (negotiable)

Outer Packaging: Woven bag or carton

Storage: Store in a cool, dry, clean warehouse; avoid direct sunlight and contact with chemicals

Shelf Life: 12 months from production date

PET Monofilament

1. Product Overview

Product Name: PET Monofilament (Polyester Monofilament)

Material: Polyethylene terephthalate (PET)

Process: Melt spinning + high-ratio drawing + heat setting

Description: Made from fiber-grade polyester chips via melt spinning, high-ratio drawing, and heat setting into a single solid fiber. Features high strength, high modulus, good heat resistance, dimensional stability, good abrasion resistance, and acid/alkali resistance. An ideal material for cable braiding, industrial filter cloth, ropes, and other applications.

Main Function: Used for braided shielding layers, tensile reinforcement layers, and core filling of wires and cables, as well as monofilament materials for industrial filter cloth, ropes, nets, etc.



2. Main Application Areas

Wires & Cables: Cable braided shielding layers, tensile reinforcement layers, core filling

Nets: Protective nets, safety nets

Industrial Filter Cloth: Filtration fabrics, screen printing fabrics

Textiles: Warp and weft yarns in technical fabrics

Ropes: Industrial ropes, bundling ropes

Braided Sleeving: Protective sleeving for wires and cables

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7	Spec 8	Spec 9	Spec 10	Spec 11	Spec 12	Spec 13	Spec 14
Diameter	mm	0.08	0.1	0.12	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.6	0.8	1
Titer	D	70	110	160	250	440	680	980	1330	1740	2200	2720	3920	6960	10880
Breaking Strength (≥)	N	1.5	2.5	3.5	5	9	13	19	25	32	40	50	70	120	180
Elongation at Break (≤)	%	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Thermal Shrinkage (≤)	%	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Density	g/cm ³	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38

Note 1: Production range 0.05–2.00 mm (30–43,000 D). Colors adjustable per customer requirements.

Note 2: Titer (D) = weight in grams per 9000 m. Corrected formula: $D = 7068.6 \times d^2 \times \rho$, where d = diameter in mm and ρ = density in g/cm³. For PET $\rho = 1.38$ g/cm³, $D \approx 9754 \times d^2$. Titer values in the table are nominal; actual values shall be based on measured linear density.

Note 3: Thermal shrinkage test condition: 150°C × 30 min (recommended for PET; confirm with supplier).

4. General Properties

Property	Unit	Typical Value	Test Standard Reference
Density	g/cm ³	1.36 – 1.40	ASTM D792
Melting Point	°C	250 – 260	ASTM D2117
Ignition Point	°C	≥ 550	—
Tensile Strength (raw material)	MPa	≥ 600	ASTM D638
Elastic Modulus	GPa	≥ 10	—
Elongation at Break (raw material)	%	15 – 30	ASTM D638
Long-Term Service Temperature	°C	-40 ~ +150	ASTM D746

5. Other Characteristics

Appearance: Natural (white translucent) / dyed customizable. Surface: smooth and uniform; free from obvious burrs and impurities.

Physical Properties: Tensile strength can reach above 500–850 MPa. High elastic modulus; good dimensional stability. Low thermal shrinkage (≤ 5%).

Chemical Properties: Resistant to most acids and bases; good resistance. Excellent UV and aging resistance.

6. Packaging & Storage

Packaging:

Spool: plastic or metal spool

Tube: paper or plastic tube

Spool Specification: Core ID customizable (38 mm, 52 mm, 76 mm, etc.); weight per spool 1–5 kg (negotiable)

Outer Packaging: Woven bag or carton

Storage: Store in a cool, dry, clean warehouse; avoid direct sunlight and contact with chemicals

Shelf Life: 12 months from production date

PTFE Fiber Yarn

1. Product Overview

Product Name: PTFE Fiber Yarn (Polytetrafluoroethylene Fiber)

English Name: PTFE Fiber Yarn

Material: Pure polytetrafluoroethylene (PTFE)

Process: Paste extrusion + drawing and heat setting

Description: Made from premium PTFE dispersion resin via paste extrusion, high-temperature drawing, and heat setting. PTFE fiber offers excellent high/low-temperature resistance (-200°C ~ +260°C), outstanding chemical stability (resistant to strong acids, strong bases, and almost all organic solvents), extremely low coefficient of friction, non-hygroscopicity, aging resistance, and flame retardancy with self-extinguishing properties. Smooth surface and relatively high strength. An ideal material for cable filling, high-temperature braiding, and corrosive environment applications.

Main Function: Used for core filling of wires and cables, high-temperature braiding layers, anti-corrosion isolation layers, and corrosion-resistant ropes, tapes, and nets in chemical, environmental protection, aerospace, and other fields.



2. Main Application Areas

Wires & Cables: Filling and braiding layers for high-temperature cables and specialty cables

Sealing Packings: Valve packings, pump sealing materials

Chemical Anti-Corrosion: Acid, alkali, and organic solvent resistant ropes, tapes, nets, and fabrics

Environmental Protection: High-temperature filter materials such as filter bags and filter cloth

Aerospace: High-temperature, low-friction binding and connection materials

3. Specifications & Physical/Mechanical Properties

Property	Unit	Spec 1	Spec 2	Spec 3	Spec 4	Spec 5	Spec 6	Spec 7	Spec 8	Spec 9	Spec 10	Spec 11	Spec 12	Spec 13	Spec 14	Spec 15	Spec 16
Diameter	mm	0.1	0.15	0.18	0.2	0.25	0.3	0.35	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1	1.2
Nominal Denier	D	200	380	500	650	1000	1500	2000	3000	5000	7200	10000	13000	16000	20000	24000	28500
Net Weight per Spool	kg/spool	15	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Breaking Strength (≥)	N	9.8	18.6	24.5	31.9	49	71.1	98	156	244	351	478	624	790	970	1174	1397
Elongation at Break (≥)	%	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Density	g/cm ³	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
Melting Point	°C	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327	327

Note 1: Corrected denier formula for circular solid monofilament: $D = 7068.6 \times d^2 \times p$, where d = diameter in mm and p = density in g/cm³.

For PTFE, $p = 2.2$ g/cm³, so $D \approx 15551 \times d^2$. The D values in the table are nominal; actual linear density shall be based on measured value.

Note 2: Breaking strength is estimated based on typical PTFE fiber strength of 0.049 N/D. Actual values shall be based on measurement.

4. Other Characteristics

Appearance / Color: White (standard). Surface: smooth and uniform; free from impurities and oil stains.

Physical Properties:

Density: 2.2 g/cm³

Melting Point: 327°C

Long-Term Service Temperature: -200°C ~ +260°C

Short-Term Temperature Resistance: withstands 300°C

Chemical Properties:

Corrosion Resistance: Resistant to strong acids, strong bases, aqua regia, and almost all organic solvents (except molten alkali metals and high-temperature high-pressure fluorine)

Non-Hygroscopic: Water absorption <0.01%

Weather Resistance: UV resistant; no aging under long-term outdoor use

Other Properties:

Flame Retardancy: LOI ≥95%; self-extinguishing upon removal from flame

Electrical Insulation: Volume resistivity $\geq 1 \times 10^{16}$ Ω·cm

Coefficient of Friction: ≤0.1 (extremely low)

Non-Toxic & Eco-Friendly: RoHS/REACH compliant

5. Packaging & Storage

Packaging:

Spool: plastic or metal spool; net weight per spool as above (15 kg / 23 kg)

Tube or pancake packaging available upon request

Core ID: 18 ± 1 mm (customizable)

Outer Packaging: Lined with moisture-proof plastic bag; outer carton or woven bag

Storage: Store in a cool, dry, clean warehouse; avoid direct sunlight and contact with chemicals

Shelf Life: 24 months from production date

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