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eSUN®

ESUNFIBER (SUZHOU) CO., LTD.

POLYLACTIC ACID(PLA) FIBER MANUAL

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2026

Official Site

Online Platform

INTERNATIONAL FAMOUS ENTERPRISE OF BIOPOLYMERS

International Famous Enterprise of PLA Fiber

Esun Fiber (Suzhou) Co., LTD. (hereinafter referred to as “Suzhou eSun"), formerly known as Changshu Changjiang Chemical Fiber Co., LTD. was established in 2000. In 2015, it joined Hengtian Fiber Group Co., Ltd. and was renamed “Hengtian Changjiang Biomaterials Co., LTD.”. In December 2023, Shenzhen Esun completed the holding acquisition of Hengtian Changjiang and changed its name to “Esun Fiber (Suzhou) Co., LTD.". The company adheres to the development of polylactic acid fiber business, and is committed to developing into a differentiated, functional polylactic acid fiber leader.

Suzhou eSun takes polylactic acid fiber and nonwoven fabric as the company's main product development and strategic development direction. The company's current production capacity includes a 10,000 tons/year melt spinning polylactic acid fiber production line, a 1,000 tons/year polylactic acid air through & thermal bonded nonwoven fabric production line and three functional polylactic acid fiber production lines. Among them, three functional polylactic acid fiber production lines have an annual capacity of 5,000 tons, which can produce a variety of differentiated products, such as polylactic acid three–dimensional crimped fiber, bi–component fiber, profiled cross section fiber, polylactic acid filament, dope dyed polylactic acid fiber, polylactic acid nonwoven and etc.

Suzhou eSun to produce polylactic acid material, polylactic acid fiber, nonwoven fabrics are in the industry leading level. And polylactic acid bicomponent fiber is the leading and characteristic product among them, it has achieved industry production and sales in the development of polylactic acid single and bicompo–nent fiber and differentiated products. The company undertook and completed the national key research and development project – research and development of high–quality polylactic acid fiber, built the PLA fiber production demonstration line and the project, “polylactic acid efficient biosynthesis and fiber preparation and application technology" won the 2023 China Textile Industry Federation First prize for technological progress.

Shenzhen Esun Industrial Co., Ltd. | Esun Fiber (Suzhou) Co., Ltd.

KEY FEATURES

PLA Fiber

The raw material comes from renewable plant resources such as corn, potato, crop straw, etc.

Natural · Skin–friendly · Antiallergic

Antibacterial · Anti–mite · Deodorize

Dehumidification · Refreshing · Quick–dry

Warm · Smooth · High resilience

Low–carbon · Eco–friendly · Sustainable

Flame retardant · Smokeless · Safety

PLA FIBER - BIODEGRADATION CYCLE DIAGRAM



■ **PLA introduction:**

Polylactic acid(PLA) is a kind of renewable and fully biodegradable polymer material, which is made from renewable plant resources and processed by biotechnology. Products made of this material can be degraded into water and carbon dioxide under industrial composting conditions after waste, polylactic acid is widely used , can be processed as plastic, can also be fiber processing. It is a fiber plastic integrated material.

Polylactic acid (PLA) fiber, as a leading bio–based biodegradable material, offers multiple significant advantages, including 100% biodegradability (under industrial composting conditions), low carbon footprint, low energy consumption, and excellent moisture absorption, breathability, and antibacterial properties. It is widely applicable in various fields such as food packaging, textiles, hygiene products, and filtration products.

Shenzhen Esun Industrial Co., Ltd. | Esun Fiber (Suzhou) Co., Ltd.

CERTIFICATIONS



DIN Certificate



DIN Certificate



FDA Certificate



China Standard Food Certificate



PLA Fiber Antibacterial Test Report



PLA Nonwoven Antibacterial Test Report



OEKO–TEX 100%



ISO Certificate

PRODUCT LIST

Classification	Name	Specification	Application
PLA Resin	Fiber Grade PLA Resin 1	eSunAl6001	PLA yarn
	Fiber Grade PLA Resin 2	eSunAl6002	PLA fiber and nonwoven fabric
PLA Fiber	PLA Ultra Short Fiber	Titer: 0.9Denier–15Denier, Length: 3/4/5/6/8/10/12mm	Wet–Laid, Air–Laid, oil
	PLA Staple	Titer: 1Denier–15Denier, Length: 6~64mm	Yarn Spinning, nonwoven fabric, filling, etc
	PLA Bi–component Fiber (PLA/PBAT. PBS. etc)	Titer: 1.5Denier–15Denier, Length: 6~64mm	Thermal–bonded nonwoven/filtration/hygiene/ filling, etc
	PLA Three–dimensional Crimped Fiber/ Fiber Balling(PLA/PLA+SORONA. etc)	Titer: 1.5Denier–6Denier, Length: 38/51/64mm	Filling for clothing, home textiles, toys, etc
PLA Yarn	PLA Filament	POY, DTY, FDY, PLA Monofilament	Clothes/silk bundles/tea bags
	100% PLA Yarn	100% PLA	Garment making
	PLA Blended Yarn	PLA/Combed cotton, Modal, Tencel, Wool, etc	Garment making
PLA nonwoven	PLA Thermal–bonded Nonwoven	Gram: 20gsm–200gsm; Width: 7cm–220cm	Top & bottom sheet of sanitary napkins and diapers/medical/product packaging, etc
	PLA Air–through Nonwoven	Gram: 20gsm–45gsm; Width: 7cm–130cm	Top & bottom of sanitary napkins and diapers/ hot air cotton, etc
	PLA Spunlaced Nonwoven	Gram: 20gsm–100gsm; Width: 7cm–220cm	Top & bottom of sanitary napkins/makeup remover pads/wipes/facial mask, etc
	PLA Needled–punched Nonwoven	Gram: 60gsm–800gsm; Width: 20cm–600cm	Clothing/sofa cloth/wall cloth/carpet/filter ele–ment, geotextile, home textile, etc
	PLA Spunbonded Nonwoven	Gram: 15gsm–200gsm; Width: 20cm–320cm	Medical/tea bags/sand barriers/protective cloth–ing/shopping bags/geotextile, filtration etc
	PLA Meltblown Nonwoven	Gram: 15gsm–50gsm; Width: 12cm–150cm	Medical/filtration, etc

Shenzhen Esun Industrial Co., Ltd. | Esun Fiber (Suzhou) Co., Ltd.

OUR PRODUCTS



■ PLA Staple



■ PLA Ultra Short Fiber



■ PLA Bi–component Fiber



■ PLA Three–dimensional Crimped Fiber



■ PLA Yarn



■ PLA Nonwoven

APPLICATION OF PLA STAPLE



■ Nonwoven

PLA Fiber —— Mono PLA Staple

Specification: Titer: 1D–15D, Length: 6–64mm

Product Features: Bio–based, biodegradable, recycled, used in nonwoven, yarns and filling.



■ Spinning



■ Filling

Shenzhen Esun Industrial Co., Ltd. | Esun Fiber (Suzhou) Co., Ltd.

APPLICATION OF PLA ULTRA SHORT FIBER



■ Coffee Pod



■ Seeding Pot Paper



■ Tea Bag

PLA Fiber —— Ultra Short Fiber

Specification: Titer: 0.9D–15D, Length: 3/4/5/6/8/10/12mm

Product Features: Biodegradable, food–safe, heat–sealable, compatible with ultrasonic/ thermal bonding processes, and free of microplastics.

APPLICATION OF BI-COMPONENT PLA FIBER



■ Structure Diagram

PLA Fiber—— Bi–Component Fiber

Material Combination: PLA/PLA, PLA/PBS, PLA/PBAT, PP/PLA

Product Features: Compatible with ultrasonic/thermal bonding processes, no additional ad–hesive required, bio–based, biodegradable, replacing oil–based ES fibers.



■ Thermal Bonding



■ Air–Through Nonwoven

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PLA FIBER FILLING APPLICATION



■ Quilt



■ Neck Pillow



■ Down Jacket



■ Toy Filling

PLA Fiber —— Filling Application

Compatible fibers: Mono PLA , Bi–Component PLA, PLA+SORONA, PLA+Wool, etc.

Product features: Bio based, natural antibacterial and mite resistant, skin friendly, moisture wicking and warm–keeping.

APPLICATION OF PLA SPUNLACED NONWOVEN



■ Sanitary Napkins



■ Packaging Bag



■ Wipes



■ Makeup Remover Wipes

PLA Nonwoven —— Spunlaced Nonwoven

Product specifications: Weight: 20gsm–100gsm, Width: 7cm–220cm

Product features: Biodegradable, natural antibacterial, skin friendly, can be blended with other cellulose fibers.

APPLICATION OF PLA NEEDLE-PUNCHED NONWOVEN



■ Scouring Pad



■ Horticultural cloth



■ Geotextile



■ Carpet

PLA Nonwoven —— Needle Punched Nonwoven

Product specifications: Weight: 60gsm–800gsm, Width: 20cm–600cm; Support color customization

Product features: Bio–based, biodegradable, non–toxic and harmless, non polluting soil/water, high–tensile strength, breathable, permeable, thermal insulation and moisture retention.

APPLICATION OF PLA THERMAL-BONDED NONWOVEN



■ Tea Bag



■ Foot Soak Packet



■ Desiccant



■ Bandage

PLA Nonwoven —— Thermal Bonded Nonwoven

Product specifications: Weight: 20gsm–200gsm, Width: 7cm–220cm

Product features: Biodegradable, no microplastic hazards, no chemical adhesives, food contact, high bonding strength.

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APPLICATION OF PLA AIR-THROUGH NONWOVEN



■ Diaper



■ Sanitary Napkins



■ Adult Incontinence



■ Pet Training Pad

PLA Nonwoven —— Air–Through Nonwoven

Product specifications: Weight: 20gsm–45gsm, Width: 7cm–130cm

Product specifications: Natural antibacterial, skin friendly, breathable, fluffy, dry, no leakage back, environmentally friendly and biodegradable.

PLA APPAREL APPLICATIONS



■ Yarns



■ Denim



■ T–shirt



■ Polo shirt

PLA —— Apparel

Product specifications: PLA blended viscose, Lyocell, Tencel, wool, etc

Product features: Bio based, natural skin friendly and antibacterial, breathable, excellent moisture wicking.

APPLICATION OF PLA SPUNBOND/MELT BLOWN NONWOVEN



■ Medical Coverall



■ Mask



■ Air Filtration



■ Shopping Bag

PLA Nonwoven —— Melt Blown Nonwoven

Product specifications: Weight: 15gsm–50gsm, Width: 12–150cm

Product features: Biodegradable, breathable, skin friendly, odorless, high fil–tration efficiency.

PLA Nonwoven—— Spunbond Nonwoven

Product specifications: Weight: 15gsm–200gsm, Width: 20–320cm

Product features: Biodegradable, food contact, high strength, supports color customization.

PRODUCTION INTRODUCTION



■ Plant Overview



■ Production Equipment



■ Fiber Production



■ Nonwoven Production

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ENVIRONMENT-FRIENDLY BIO-BASED PLA FIBER

