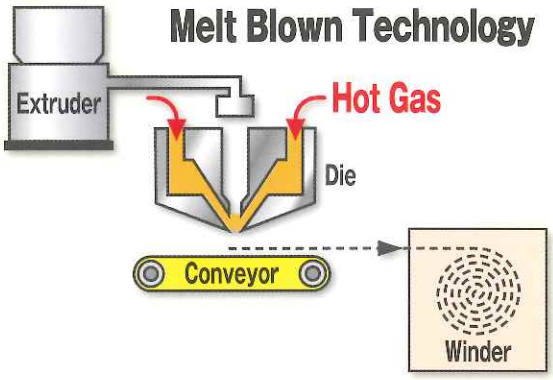
Melt Blown Technology



Melt blown is one of the jet-spinning methods that realizes binderless and self-bonding web composed of ultrafine fibers. Its process is simple. Molten thermoplastic resin is extruded from a die having multi-holes, extended by blowing hot and high pressure air and collected on the conveyor.

[Characteristic of TAPYRUS]
The diameter of its fibers is from less than 1 micro meter to 30 micro meters, or from 0.006 to 6 decitex (a decitex is a unit of a fiber's thickness where 10,000 meters of the fiber weighs 1 gram), making it extremely fine webs.

[Basis weight]
Basis weight can be controlled from 7 to 400g/m^2.

[Self-binded nonwovens]
TAPYRUS is non-toxic and safe without using any binders or adhesives.

[Dense and uniform]
TAPYRUS is composed of uniform, ultrafine and isotropic fibers.

[Micro-porous]
Excellent filtration efficiency by uniform component with micron size pore.

[Soft texture]
TAPYRUS is soft and well draped.

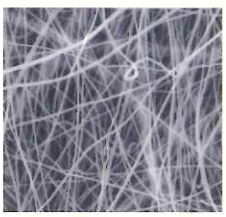
Raw Material of Resins

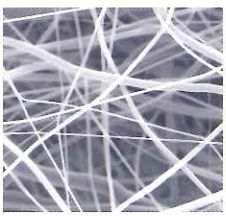
Polypropylene	+Well chemical resistance, water repellency, and electrical insulation +Tolerant to sterilization by autoclave for food, beverage, pharmaceutical and industrial applications. +Competitive price due to commodity resin
Polyester	+Well heat and oxidation resistance. MP:220-240 deg. +Suitable for secondary processes such as impregnation by water-based solution
Polyphenylene Sulfide	+Well heat resistance and flame retardant. +Well chemical resistance except hot and concentrated nitric acid solution
Polyamide	+Excellent water absorbency by amide group +Well heat and chemical resistance MP:225 deg
Polymethylpenten	+Well heat and chemical resistance and electrical insulation +One of the polyolefin resin
Polylactic acid	+Environmentally friendly and biodegradable resin that is finally decomposed into carbon dioxide and water by microorganisms.

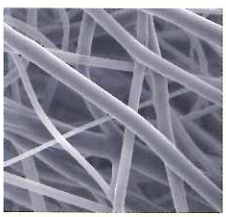
※We have a lot of experiences to make trials with various types of thermoplastics.

[Tailor-made Products]
TAPYRUS has 200 kinds of grade, and we are willing to make tailor-made products as needed.

Ultra superfine fiber melt blown nonwovens

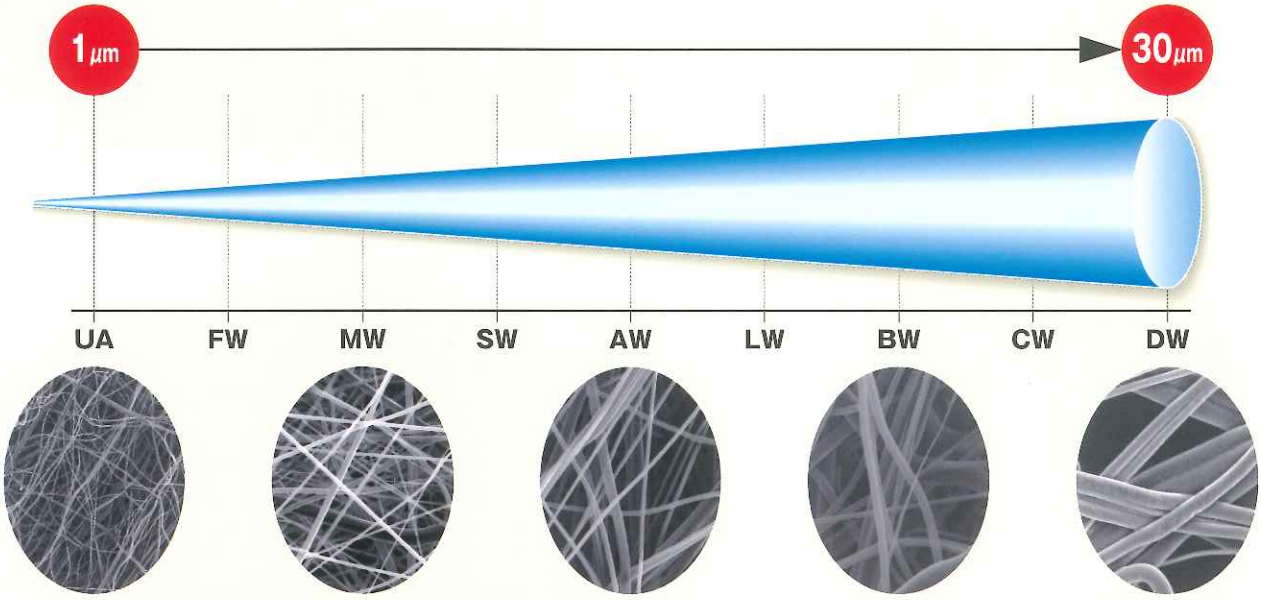

Ultra superfine fiber


Microfiber


Normal fiber

Ultra superfine fiber melt blown nonwovens less than 1 micron can be produced by polypropylene with optimized manufacturing conditions. They are expected to apply to the new fields of products which were difficult in the past.

Fiber diameter



One of the characteristics of TAPYRUS is a wide range of fiber diameters, from less than 1 to 30 microns.

A rich assortment of products to meet any demand

	Grade Unit	Typical Properties of Web: Basis Weight (g/m²)	Thickness (mm)	Air Permeability (cc/cm²/sec)	Maximum Pore Diameter (μm)
■Polypropylene	P010SW-00X	10	0.13	130	70
	P020SW-00X	20	0.20	55	60
	P030LW-00X	30	0.37	141	270
	P030AW-00X	30	0.39	77	63
	P030FW-00X	30	0.40	25	33
	P030UA-00X	30	0.40	19	28
	P045CW-00X	45	1.10	645	2250
	P050SW-00X	50	0.43	36	47
	P100SW-00X	100	1.00	14	40
	P200SW-00X	200	1.34	8	37
■Calendered (Polypropylene)	P050SW-0CX	50	0.20	14	40
	P050FW-0CX	50	0.18	4	23
	P120UA-0CX	120	0.21	1>	6
	P200SW-0CX	200	0.60	2	23
■Polyester	B040U0-00X	40	0.35	20	26
	B045S0-00X	45	0.35	45	54
■Polyphenylenesulfide	S045S0-00X	45	0.40	56	58
■Polyamide	N060SW-00X	61.5	0.49	23	39

Various applications

[Battery separators]

TAPYRUS made of Polypropylene has well chemical resistance and electrolyte holding capacity. It is suitable for primary battery separators which requires long-life and reliability of properties.
TAPYRUS made of heat-resistance resin is more suitable for heat resistant battery.

[Liquid filters]

TAPYRUS is suitable for liquid filters over 0.3 micron particles due to well controlled fiber diameters, grammage, thickness, water penetration and pore size. TAPYRUS is applied to the filters for food, beverage, pharmaceutical, electronics and so on.
Non-calendared and calendared products are mainly applied for depth filters and surface filters, respectively.

[Masks]

Since TAPYRUS has BFE over 99% and complies with ASTM requirements, it is applied to medical masks, consumable masks and industrial masks. In addition, TAPYRUS complies with N95 as well.

[Air filters]

TAPYRUS has excellent collection efficiency, lower pressure drop and dust holding capacity. By laminated with other nonwovens or papers, TAPYRUS is also applied to the various air filters such as middle class filter, high class filter, HEPA, air purifier as household appliance and cabin filter for automotive.

[Wet wipers]

TAPYRUS is superior to wiping ability that can reach small hollows. It is also appropriate for wiping fragile OA equipment and removing the stain from carpet or clothes.

[Coffee filters]

TAPYRUS is applied to the coffee filters together with other material. TAPYRUS can control the optimum extraction time and prevent fine coffee powder leakage.