

polyester staple fiber used for?

in non-woven weaving. In the textile industry, polyester staple fiber is used in spinning production as a raw material for Polyester spun yarn, further knitted or woven into fabrics. Additionally, polyester staple fiber has a wide range of applications, including the following:



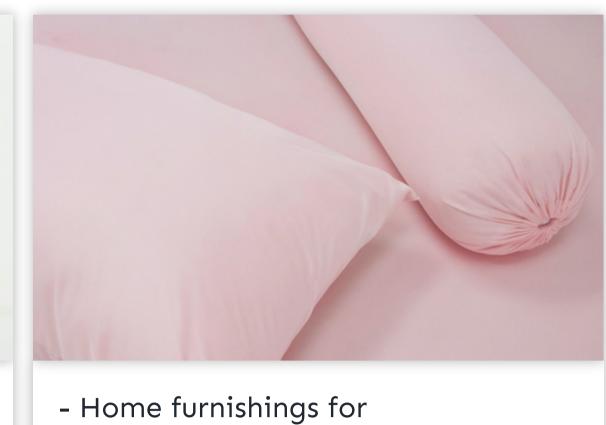


- Home textile for filling pillows



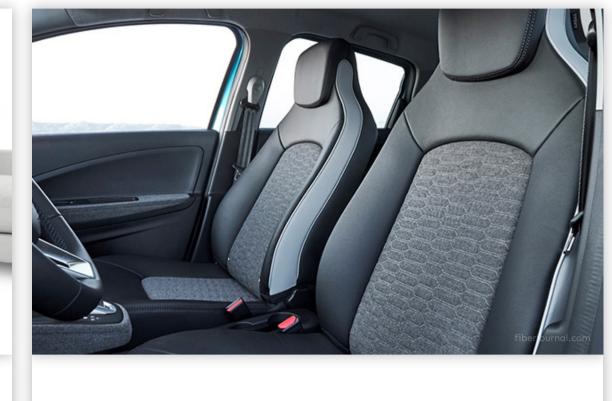






carpets, mattresses, bedsheets, etc.





Automotive industry

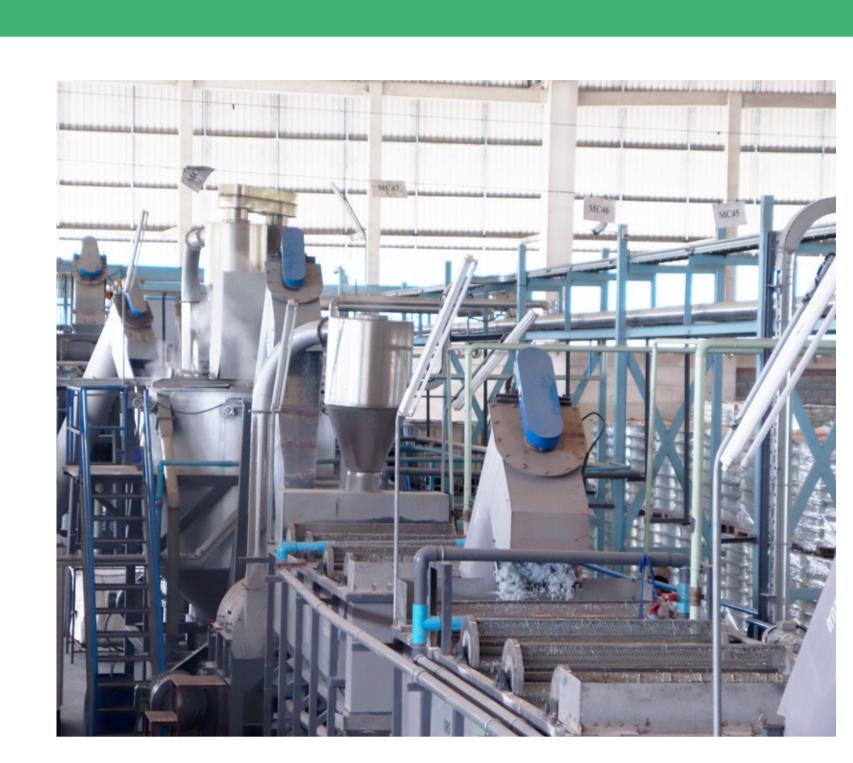






## What is a polyester staple fiber in textile?

Polyester staple fiber is mainly used in spinning production in the textile industry. Wherein, the resulting yarns, spun yarns, are used for apparel manufacturing, including sportswear, activewear, and intimate wear. As well as, shirts, socks, dresses, lingerie, gloves, suits, and sewing threads etc. In spinning production, polyester staple fiber can be individually produced for 100% Polyester spun yarn or combined with cotton, viscose or wool for blended yarn such as CVC 70/30 consisting of 70% cotton fiber and 30% polyester staple fiber. Compared to the cotton fiber, polyester staple fiber has major benefits in terms of cost, thinness, strength, abrasion resistance, water absorption, and multiple designs and colors. Thus, polyester staple fiber can be considered the main cotton fiber alternative for the garment industry.



# Where would you find staple fiber?

You can find polyester staple fiber from a reliable polyester manufacturer. Our company, Thai Polyester Company (TPC), has been a registered company specializing in 100% fiber and filament polyester yarn in Thailand since 2001. We are a fully integrated polyester manufacturer with a capacity of approximately 233,600 tons annually when combining polyester staple fiber and spun production. Our products are certified by international standards, including STANDARD 100 by OEKO-TEX®, ISO 9001:2015 and the Global Recycled Standard (GRS). Deniers and cut length are the significant factors for polyester staple fiber, where the size and length are related to the end product. Our product range;



#### Recycled 100% polyester staple fiber: - Recycled 1.2D x 32mm, 38mm, 44mm and 51mm SD RW - Recycled 1.4D x 32mm, 38mm, 44mm and 51mm SD DDB (Dope Dyed Black) Raw White (RW) RW is slightly different from virgin PSF; its color looks pretty yellow, which is natural from the Dope Dyed Black (DDB) DDB for recycled polyester looks similar to virgin PSF. It contains a black master-batch since the process of melting before injecting. For this reason, there is no difference between Dope-Dyed Black virgin PSF and Dope Dyed Black Recycled PSF by vision.



- Denier (De') - 1.20 +/- 0.03 - Tenacity (g/De') - 6.6 +/- 0.2 - Elongation (%) - 23.0 +/- 3.0 - Crimp Number (n/cm) - 10.0 +/- 2.0 - Fiber Length (mm) - 38.0 +/- 0.8 - Heat Shrinkage (%) - 3.0 +/- 2.0 - Oil Pick Up (%) - 0.120 +/- 0.02



Polyester staple fiber is safe for all applications. In the present day, polyester staple fiber is one of the most used fiber types globally for the textile industry. Due to its advantageous characteristics, the global demand for

polyester staple fiber has been increasing for decades as an alternative and sustainable option to cotton and natural fibers. Flexibility, durability, high toughness, heat-resistance, stain-resistance, wrinkle resistance, versatility, and economical price are the main reasons for boosting polyester staple fiber in the global market. Polyester staple fiber is safe not for just humans in textile use, but polyester staple fiber can also be produced as recycled polyester staple fiber which is environmentally friendly. Global warming and pollution concerns have been the center of the world's attention nowadays, so it would be great if we started using recyclable products, reusing and reducing them. Polyester recycled production starts from collecting plastic bottles and waste, which is then cleaned. Subsequently, the PET bottles are then cut into small pieces called PET flakes. Then, the flakes are melted into pellets, re-melted using high temperatures, and finally, those pellets are spun into the polyester recycled polymer.

## What does polyester staple fiber feel?

Polyester staple fiber feels like cotton. In the past, people were more likely to wear apparel made from natural fibers due to their familiarity, softness, and comfortable in wear nature. However, synthetic man-made fiber production has continued to develop properties similar to natural fiber. The end product of polyester staple fiber after the spinning process is called Polyester spun yarn. The properties and appearances are very close to cotton yarn. Polyester spun also has the same denier count as cotton, while the price is lower. Polyester staple fiber also has the alternative option to be environmentally friendly by using recycled polyester staple fiber, which is sustainable and eco-friendly. And the production of recycled polyester requires far fewer resources than new fibers and generates fewer Co2 emissions. Using recycled polyester staple fiber is a major value add to a company and it also creates a significant impact on brand images compared to others. The differences in denier and cut length also affect the difference in hand-feel and product size. The smaller denier and shorter cut length bring a softer and smoother feeling. According to our product, our newly developed item is polyester staple fiber 1.0 D, which is used in spinning spun yarn. Spun yarn made from polyester staple fiber 1.0 D will have a soft feeling to the touch and is very close to spun cotton.

### Polyester Staple Fiber vs Polyester Filament Yarn

In the present day, Polyester is commonly used in the textile industry, which is divided into two types: polyester staple fiber and polyester filament yarn. The major differences between polyester staple and polyester filament yarn are length, classification and characteristics. The first difference between polyester staple fiber and polyester filament yarn is length. Although polyester staple fiber is short fiber, the length varies from a few centimeters to 10 centimeters. On the other hand, polyester filament yarn is a continuous fiber with a long yarn that starts from 1,000 meters winding into a group.

> In addition, there are differences in classification. Polyester staple fiber is primarily used in spinning to produce spun yarn, while polyester filament yarn is divided into three categories;



Our company manufacturing capacity is 233,600 tons annually of polyester staple fiber and spun, and we can produce 84,000 tons of polyester filament yarn annually. The last differences are overall characteristics. Polyester staple fiber generally has hairiness on the surface, is fully fluffy and is commonly used in autumn and winter fabrics. In addition, a fabric made from polyester staple fiber has the benefit of high heat resistance, high wrinkle and abrasion resistance, and quick dries after

washing. Meanwhile, a fabric made from filaments will have a brighter, smoother surface and a stronger, more lustrous surface commonly used in summer fabrics.

PSF luster Refers to the degree of light reflected from surfaces of fibers or the degree of gloss or sheen that the fiber possesses.

1.Full dull Full dull yarns are manufactured from raw materials modified chemically and physically to reduce their normal luster. A few of the qualities of full dull yarns are that they have high tenacity and strength and look like cotton fiber. In addition, these yarns are of good pendent, soft visual appeal and a strong covering. Full dull yarns have various applications in manufacturing apparel, home textiles, etc. 2.Semi-dull Semi-dull yarn is manufactured from raw materials with low luster

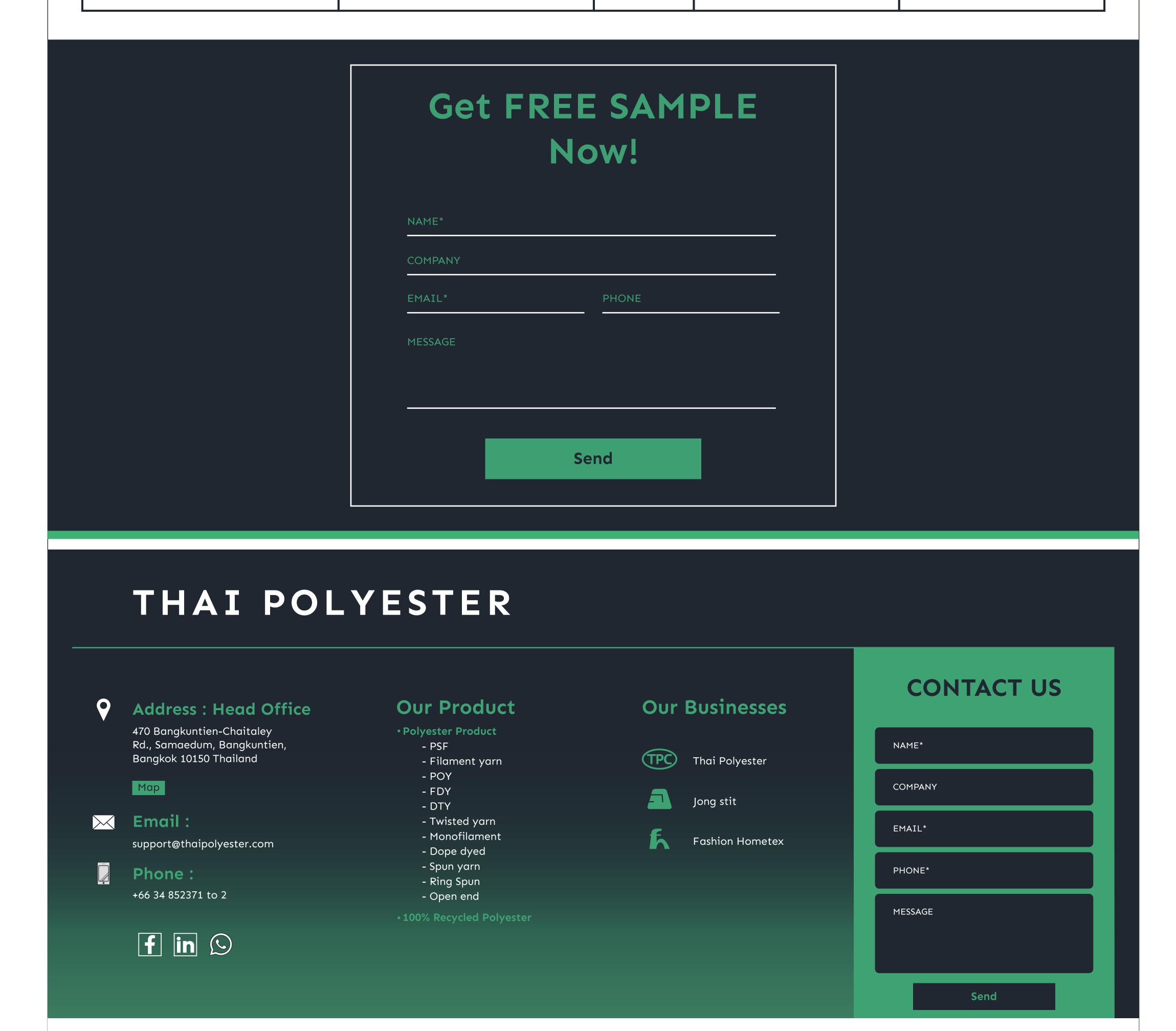






## Polyester Staple Fiber (PSF) product we provide:

FIBER	DENIER	CUT LENGTH (MM)	TYPE	COLOR
	*1.0,1.2*	32,38,44,51	Virgin	RW
PSF Virgin	1.4			DDB
PSF Recycled	*1.2*	32,38,44,51	Recycled	RW
	1.4			DDB



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