

Clothing Fibers

Natural and Synthetic

Natural Fibers:

- Cotton
- Linen
- Silk
- Wool

Cotton- Breathable and inexpensive

- Cotton is made into fabric after first being cleaned, bleached, spun into threads, and woven. The process is fairly complicated and is mostly done by machine.

ADVANTAGES: It's breathable, inexpensive, resists static, and it can withstand high heat.

DISADVANTAGES: It's prone to shrinking and stretching, it dries slowly, and it isn't wrinkle resistant.

Cotton can be washed in any water temperature, although higher temperatures are better for getting stains out... but hot water can shrink the fabric.



Linen- One of the oldest textile fibers

- Linen is made of the fiber on a flax plant and is difficult to harvest, contributing to its expense. It takes lots of chemicals and compacting to turn it to fabric.

Wash your fabric regularly, but make sure that you do not tumble dry them, as that can cause permanent creasing.

ADVANTAGES: It can keep you cool, and is really easy to clean. Organic linen uses natural dyes, which are healthier for you and the environment.

DISADVANTAGE: It can be really, really expensive



Silk- Expensive but smooth

- Silkworms are a type of caterpillars from an adult moth. The silk fibers are then harvested by heating with steam, and the fibers are then spun to make long threads, which are treated, dyed and woven together to make silk clothing.

ADVANTAGES: Is strong but lightweight, has a great luster, and is stain resistant

DISADVANTAGES: Is very expensive, and it degrades over time- making it hard to preserve.

It's recommended that you hand wash silk, even if the label says that the article is safe to machine wash. But if you do machine wash it, you **NEED** to use the delicate cycle.



Wool- Is a great insulator

- The first step in making wool fabric is shearing it from sheep, then its quality is checked and it is prepared for spinning. The wool is spun into long strands. Then the strands are woven into fabric.

Soak wool in cold water, and then gently rub out anywhere that needs extra cleaning. You can wash it in the washing machine, but use cold water, and air dry it.

ADVANTAGES: It holds moisture without feeling wet, plus it is a great thermal insulator.

DISADVANTAGES: It can be scratchy and uncomfortable to wear, and heat and moisture can cause it to felt.



Synthetic Fibers

- Nylon
- Polyester
- Acrylic
- Rayon
- Spandex
- Acetate

Nylon- One of the strongest textile materials

- Nylon is made by forcing molten nylon through very small holes in a device called a spinneret. The streams of nylon harden into filament once they come in contact with air. They are then wound onto bobbins. These fibres are drawn stretched after they cool. Further treatment is usually given to give it a different texture or bulk.

ADVANTAGES: Is versatile, has good wear resistance, and can handle excessive temperatures.

DISADVANTAGES: It does not absorb water very well, and it lacks dimensional stability.

Wash nylons separate from other fabrics. Use the cold water setting and cycle according to what the tag says on your garment. When drying, only use the lowest temperature possible.



Polyester- Wrinkle free fabric

- Polyester is a synthetic fiber derived from coal, air, water, and petroleum. Polyester fibers are formed from a chemical reaction between an acid and alcohol. In this reaction, two or more molecules combine to make a large molecule whose structure repeats throughout its length.

ADVANTAGES: It's hard to stain, it holds its shape, and it doesn't wrinkle.

DISADVANTAGES: It doesn't absorb dyes, it doesn't feel as soft as cotton does, and it is highly shrinkable.

You can wash polyester in your washing machine with either cold or warm water, and then you can dry it in your machine as well.



Acrylic- Resembles wool's softness and bulkiness

- Acrylic can either be wet or dry spun. They use solvents to dissolve the polymer and then solidify them for their spinning process.

ADVANTAGES: Retains color well, has a wool-like texture, and is resistant to wrinkling.

DISADVANTAGES: Relatively poor insulation, and it melts as it burns.

You should wash acrylic fabric either by hand, or have it dry cleaned. Wash in warm water, then squeeze out excess water gently.



Rayon- Strong and absorbent fiber

- Polyesters are generally manufactured from petroleum from which the constituent acids and alcohols are derived. Once the polyester fiber is ready it is used to make filament and spun yarns. The yarns can be blended with other fibers to make various blended fabrics.

ADVANTAGES: Is environmentally friendly, more absorbent than cotton, and can withstand high temperatures.

DISADVANTAGES: Wrinkles easily, is prone to shrinking, and the fabric fades in the sun exposure.

Unless on the tag it says machine washable, either wash garment by hand, or have dry cleaned. For hand washing use lukewarm water.



Spandex- Provides stretch and good recovery

- It is made up of a long chain polymer called polyurethane, which is produced by reacting a polyester with a diisocyanate. The polymer is converted into a fiber using a dry spinning technique

ADVANTAGES: Lightweight and comfortable to wear, resistant to perspiration, has great elasticity, and is durable and strong.

DISADVANTAGES: Sticks to your body, doesn't allow your skin to breathe easily, and is sensitive to heat.

You can hand or machine wash spandex garments using warm water. Tumble dry on low temperature setting.



Acetate- Has good body and drapes well

- Acetate is made from biodegrading and naturally occurring substances especially wood shaving. It is one of the man-made fabrics and has an appearance almost same to silk. It is one of the most versatile of fabrics and can resist wrinkling.

You should hand wash acetate garments with warm water and only a light-duty detergent. Line dry- don't dry in dryer.

ADVANTAGES: Has a silky look to it, and a luxurious feel.

DISADVANTAGES: The dyes can fade or bleed, is heat sensitive, and is a relatively weak fiber.



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