

Fibers and Fabrics

It seems to be getting more difficult to find high-quality items when shopping for clothes or really anything made with fabric, especially if you don't know what to look out for. So here is a simple guide to help you know what you are getting and how it will behave. Disclaimer, this is not the end-all-be-all of textiles, but rather a jumping off point of learning.

Why this matters, knowing how your fabric behaves can help you make informed decisions and improve the longevity of the product. For instance, it's important to know how different fibers can affect the same fabric.

To start, it's easiest to place all fibers into three basic categories, natural, manufactured, and synthetic.

Natural fibers are ones that are created from plants or animals; examples include flax, cotton, wool, silk, and hemp. This category was our first and only category for several thousands of years and has had a resurgence in the past few years for several different reasons. The easiest way to guess at how these fibers will behave in a fabric is by thinking back to their source. For instance, things like cotton or flax come from plants so they burn easily, wrinkle easily, but are very absorbent and very breathable. Silk and wool are a little different, in that they are protein based instead of cellulosic. Which means that they can actually self-extinguish and are a little stronger, which is great for durability.

Manufactured fibers are ones that are derived from nature but then chemically altered to be useable as a fiber, such as viscose, rayon, modal, or lyocell. These fibers start as an unusable plant, such as a tree or bamboo, and then go through several processes to become useable. There can be a lot of misinformation for both the pros and cons of these materials, so be careful when doing your own research. Since Manufactured fibers are the middle ground, they can take on both the pros and cons of naturals and synthetics, which means these can be tricky to identify, but they also can help split the difference on a tricky decision.

Lastly, we have synthetics; some of the most common synthetic fibers are polyester, spandex, nylon, and acrylic which have gone on a roller coaster of popularity because they are not found in nature and are derived from oil. However, before we pull out the pitch forks or sing its praises, it's important to keep in mind why they were created. Originally most of the synthetics were created to mimic a cheaper option for natural fibers, giving the common people better access to materials they need. Now, many companies have taken the "cheep" aspect too far, but synthetics should not be discounted and are often a viable option in some circumstances.

These fibers do take up a large portion of the market because they are cheap to produce and can be done quickly. They perform great in athletic and outdoor settings as well as everyday wear. These fabrics generally melt in a flame, are wrinkle resistant, and are very likely to pill (the little

clumps that appear on the surface). However, each of the fibers were designed for different purposes, meaning each fiber behaves in unique ways. Polyester is the work horse and can be altered to work in most settings, and nylon is one of the strongest fibers the common consumer will find. Spandex is incredibly weak but when paired with another fiber it can make a fabric stretch twice as far, and acrylic is meant to mimic wool with its fuzziness and heat retention.

At this point it's important to keep in mind that there have been great advances made in textiles, which means that wool can keep you cool in warm weather, or a synthetic might actually be better quality than a natural. So do your own research into fibers and products so you can know what you are getting. There are also a lot of lovely blends of these fibers to achieve different characteristics and end uses, so keep an open mind as you shop.

Now that we have covered the basics, it's important to remember that preference should be the bigger deciding factor when it comes to decision making. Often there is no "right" answer when it comes to picking fabrics; it depends on your unique circumstances and what you will use more. So even if the fiber may not be the "best choice" if it makes you feel more comfortable than that is the correct one.

As a final reminder, this article serves a jumping off point of knowledge and for a better understanding, further research is needed. It's important to keep in mind that the textile industry has been around for thousands of years, which means there are different categories and definitions, so be aware that not every site will say the same thing. To help, here are some great websites to start your learning:

thetextilegateway.com

textilestudycenter.com

textileengineering.net

textilelearner.net