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# Wearing Synthetic Fabrics More Sustainably



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© JUN 6, 2023   [microplastics](#), [synthetic fabric](#)



When you're looking for fabrics with the lowest impact on the environment, **natural fibers** almost always come out ahead of synthetics. With a huge carbon footprint and often coated in toxic chemicals, synthetics are best avoided. But sometimes there aren't great alternatives to synthetics, particularly for special applications like raingear or athletic wear. Maybe you can't live without your Gore-Tex jacket or your stretchy yoga pants. But you can minimize their impacts.

## Synthetic Fabrics

There are a lot of **different kinds of synthetics** – polyester, acrylic, nylon, and a host of proprietary brand names. But they all have one thing in common. Synthetic fabrics are all, ultimately, made out of oil, just like plastic. And like plastic, they are **technically recyclable** but usually end up in the landfill or

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incinerator. We throw away [40 million tons](#) of textiles <sup>CLOSE</sup> every year – many of them never worn. Each year, 39,000 tons of unsold clothes from Europe and the United States end up in [Chilean landfills](#). People discard [roughly a quarter](#) of the clothes they buy without ever wearing them.

Petrochemical-based synthetics make up [65% of all fibers](#) produced annually, with polyester by far the most widely used synthetic fabric. Despite the serious environmental impacts of cotton production, [a T-shirt](#) made from cotton produces 2.1 kg [CO2-eq](#) emissions while a polyester T-shirt emits an estimated 5.5 kg CO2-eq.

## Polyester Pollution

Besides climate emissions, synthetic fabrics also contribute to plastic pollution. Washing clothes breaks off tiny [microfibers](#) – that’s what makes the lint in your dryer trap. The lint from synthetic clothes becomes particles of [microplastic](#), which enter wastewater from the washing machine and eventually make their way to the ocean.

Both natural and synthetic fibers are often coated with chemicals that improve performance. [PFAS](#) protect clothing from stains and contribute to waterproofing but are associated with serious elevated [health risks](#). Waterproofing treatments like Gore-Tex are made from petrochemicals, usually polyurethane, and often contain PFAS as well. These forever chemicals can enter the environment when clothes are washed and when they are discarded.

## Buy Recycled

One of the most sustainable ways to wear synthetic fabrics is to buy them second-hand. Thrift store athletic wear may not be appealing – or even still functional – but fortunately, some activewear brands are using recycled fibers. Brands like [Recover](#) make T-shirts and fleece from recycled PET, the same plastic as beverage containers. [Girlfriend Collective](#) even uses recycled PET to make performance wear like leggings and sports bras. Surprisingly, even some mainstream brands like Reformation are using recycled plastics for their activewear lines; [Ref Active](#) fabric uses 45% less energy, 20% less water, and 30% less GHG emissions than virgin polyester.

There are two [certification systems](#) for recycled polyesters. Recycled Claim Standard (RCS) certification requires a minimum of 5% recycled content. The Global Recycle Standard (GRS) requires a minimum of 20% recycled content, with at least 50% recycled content to use the GRS logo.

Most of Patagonia’s [nylon products](#) use a 50/50 blend of virgin and recycled nylon from salvaged fishing nets. Various manufacturers are using [Econyl](#), recycled nylon, to make everything from chairs to bathing suits.



Waterproofing treatments like Gore-Tex are made from petrochemicals, usually polyurethane, and often contain PFAS as well. The company recently introduced a new waterproof fabric without PFAS. Image: [Maël BALLAND](#)

## Safer Synthetics

Many Gore-Tex products still contain PFAS. But in 2022, Gore-Tex introduced a [new waterproof fabric](#) used in some product lines that replaces PFAS with expanded polyethylene (ePE). Gore-Tex can also be recycled into new products, as the [Norrona](#) brand does. Although [paraffin wax](#) is also a petroleum product, it is another effective waterproofing material that has been shown to be safer than PFAS. Look for textile certifications such as [Bluesign](#) and [Oeko-Tex](#), which indicate that a product was made with only safer materials and treatments.

Eventually, you may be able to find clothing made from organic synthetics – that is, polyesters made from [plant-based resources](#) instead of crude oil. These biopolyesters are mostly in the [early stages](#) of development, so you won't find plant-based polyester clothes at the mall anytime soon. But the technology is promising, so it's worth keeping an eye out for opportunities to support innovative companies when they do bring biopolyester products to market.

## Maintenance

Purchasing fewer items and maintaining them longer is another way to minimize the impact of your synthetic clothes. You can [reduce microfiber pollution](#) by using [cooler, faster](#) laundry cycles and hanging clothes to dry. Installing a [microfiber filter](#), or upgrading to a new washing machine with a microfiber filter, will capture most of the microfibers that your laundry generates.

Waterproof materials require special care. Conventional detergents can harm waterproof performance. When rain gear needs laundering, use a specialized cleaner to protect the coating, and apply protective treatments like [PFAS-free Nikwax](#) to extend the life of the garment.

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