CLEAN by Design

Polyester is a Synthetic, Non-Renewable Fiber, With Some Surprising Redeemable Qualities

POLYESTER

- Polyester is derived from petroleum
- In just the last decade, polyester has surpassed cotton as the most commonly produced fiber

Publicized environmental concerns:

- Energy requirements for fiber production are high. Energy inputs and greenhouse gas emissions in polyester production are high (125 MJ/kg fiber versus 100 MJ/kg of viscose fiber)

Most commonly, the chemicals used in production are not released to the environment

- However factories without end-of-pipe wastewater treatment systems, release antimony along with a host of other potentially dangerous substances like cobalt, manganese salts, sodium bromide, and titanium dioxide.

Polyester production is not entirely worse for the environment compared to natural fibers

- Water consumption in producing polyester is much lower than for natural fibers, sometimes little to none.

Recycled Polyester is a Better Environmental Choice and Gaining In Popularity

Recycled polyester is made from recycled plastic bottles, sometimes referred to rPET. It also:

- Saves petroleum and dependency on oil
- Requires 70 percent less energy than virgin fiber
- Keeps bottles out of landfills
- However it costs about 15 to 20 percent more than virgin fiber
- The output of rPET is also of lesser grade quality than virgin polyester

Price, capacity and purity levels are currently limiting rPET

- Manufacturers are confident that these issues will be resolved soon

PLA (polylactic acid), is a synthetic substitute produced from renewable resources like corn and sugar beets, and is biodegradable. This option is promising environmentally, but fairly new and not widely accessible at this time.

We recommend using recycled polyester whenever possible, and to keep informed about PLA production as a more viable substitute for the future.

To find out more about fiber choices and how they relate to the four heaviest environmental impacts in the fashion industry, please see the Clean By Design website: **www.nrdc.org/cleanbydesign**

For detailed information on polyester, please see our in-depth report and citations to research sources.

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