

# What Is Polyester Fabric?

Polyester is a synthetic fabric that's usually derived from petroleum. This fabric is one of the world's most popular textiles, and it is used in thousands of different consumer and industrial applications.

Chemically, polyester is a polymer primarily composed of compounds within the ester functional group. Most synthetic and some plant-based polyester fibers are made from ethylene, which is a constituent of petroleum that can also be derived from other sources. While some forms of polyester are biodegradable, most of them are not, and polyester production and use contribute to pollution around the world.

In some applications, polyester may be the sole constituent of apparel products, but it's more common for polyester to be blended with cotton or another natural fiber. Use of polyester in apparel reduces production costs, but it also decreases the comfortability of apparel.

When blended with cotton, polyester improves the shrinkage, durability, and wrinkling profile of this widely-produced natural fiber. Polyester fabric is highly resistant to environmental conditions, which makes it ideal for long-term use in outdoor applications.



# How Is Polyester Fabric Made?

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### 1. Creating a Monomer

The process of creating polyester fiber begins with reacting ethylene glycol with dimethyl terephthalate at high heat. This reaction results in a monomer.

### 2. Creating a Polymer

The monomer is then reacted with dimethyl terephthalate again to create a polymer.



### 3. Extruding

This molten polyester polymer is extruded from the reaction chamber in long strips, and these strips are allowed to cool and dry, and then they are broken apart in to small pieces.

### 4. Spinning

The resulting chips are then melted again to create a honey-like substance, which is extruded through a spinneret to create fibers.

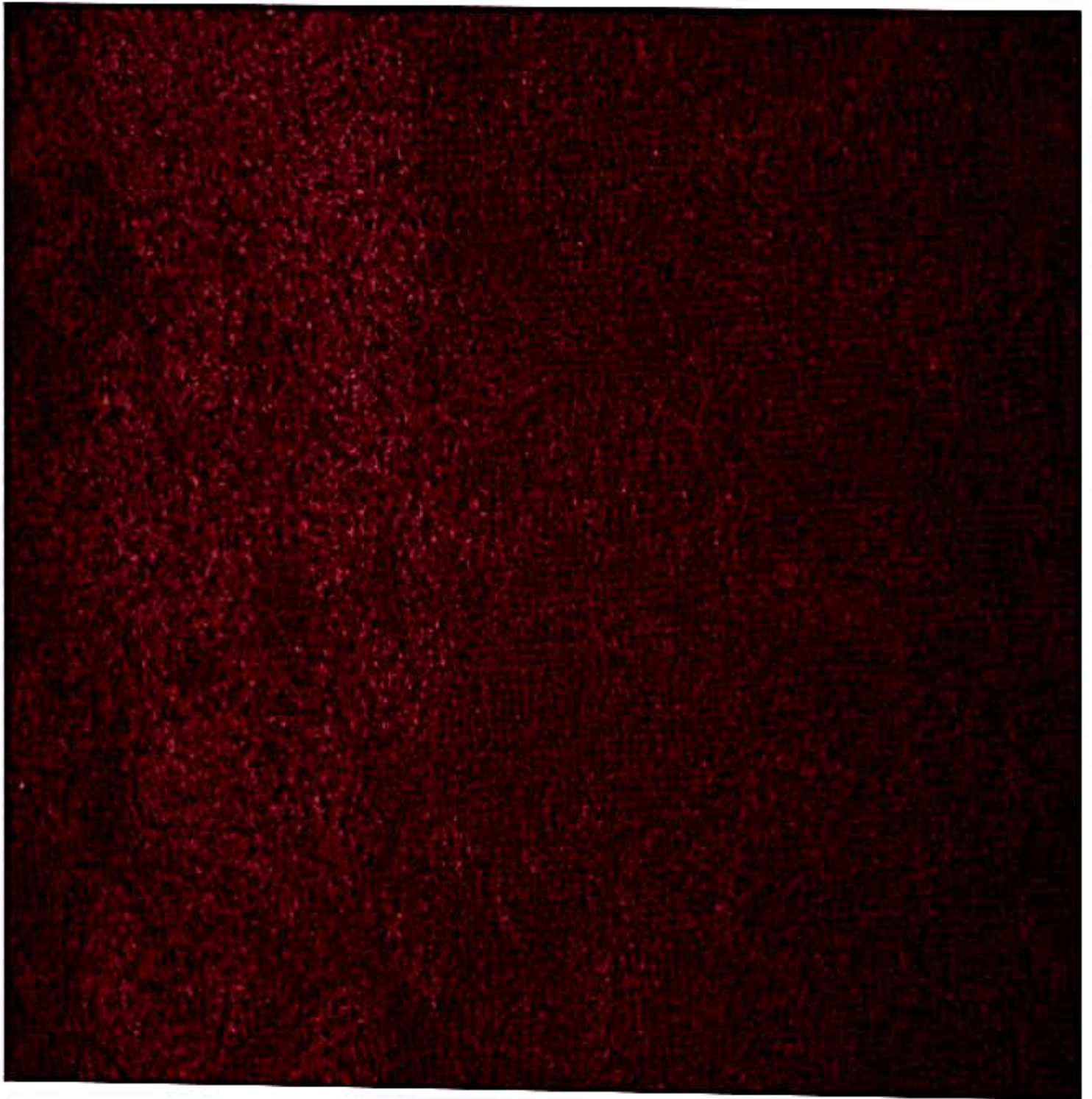


### 5. Finishing

The resulting polyester filaments may be cut or reacted with various chemicals to achieve the correct end result.

# Ethylene Polyester

Ethylene polyester (PET) is the most commonly-produced form of polyester fiber. The primary component of PET is petroleum-derived ethylene, and in the process of creating polyester fiber, ethylene serves as the polymer that interacts with other chemicals to create a stable fibrous compound.



**Chalky - Solid Polyester Cloth**