



Cotton ... The Most Popular Fabric in the World

4.105

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Cotton fiber is amazingly versatile, whether alone or blended, it outsells all other fibers combined. It's the leading American cash crop, and consumers know that fabrics made from cotton put forth natural comfort, visual appeal, durability and value. One bale of cotton fiber produces 215 pairs of jeans, 249 bed sheets, 409 sport shirts or 313,600 one-hundred-dollar bills.



What is Cotton?

Cotton is a natural fiber that comes from the seedpod of the cotton plant and is used to make many fabric types at every price point. The fiber is hollow in the center and, under the microscope, resembles a twisted ribbon.

Cotton fiber has been cultivated for 7,000 years, and it seems to increase in popularity as modern technology blends it with other fibers and gives it special performance finishes.

Cotton can be knit or woven into cloth. The two most common weaves for cotton are the plain and twill weave. A plain weave produces fabrics like gingham, percale, chambray and broadcloth. A twill weave is more durable and is found in denim, khaki and gabardine. Satin weave is less common with cotton fibers because it's a little dressier, but it is found in high-sheen cottons like sateen.

Fabric Characteristics

Cotton fabric is popular because it's easy to care for and comfortable year-round. In hot, humid weather, cotton "breathes." As the body perspires, cotton fibers absorb the moisture and release it on the surface of the fabric, so it evaporates. In cold weather, if the fabric remains dry, the fibers retain body heat, especially napped fabrics.

Cotton is easy to clean; it can be laundered or dry-cleaned. It withstands high water temperatures, so it can be boiled and thus sterilized. It does wrinkle easily and is prone to shrinkage; however, blending cotton

with other fibers and permanent fabric finishes reduces wrinkles and shrinkage. Functional finishes, such as durable press and mildew-, flame- and stain-resistance, have added to cotton's appeal. Even with shrinkage control, most cotton fabrics shrink during the first wash, so it's imperative to prewash them before sewing. When polyester is added to cotton, it doesn't breathe well and tends to pill, so many consumers prefer the comfort of 100% cotton.

Cotton

- Absorbs up to 27 times its own weight in water
- Has a comfortable, soft hand
- Is easy to launder
- Takes dye easily, good color retention
- Is durable and strong
- Conducts heat well
- Resists abrasion
- Resists pilling and moths
- Has little resiliency; prone to wrinkling
- Weakens from extended exposure to sunlight
- Is easy to handle and sew

Selecting Fabric

A pure, 100%-cotton fabric is the best fabric for beginning sewers; it's easy to cut and to sew.

Almost every type of fabric available can be made with cotton fibers. The challenge is selecting the right fabric for the project. Lightweight cottons are best for shirts and dresses; medium-weight fabrics are suitable

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for pants, skirts, shirts, dresses, curtains, sheets and children's clothes; heavier fabrics are used for pants, outerwear, window treatments and work clothes.

Purchase the highest quality cotton you can afford. Look for closely woven fabric with long, 1/2" fibers and even yarns. Scrape the fabric with your fingernail, if the threads separate the fabric won't wear well. To check the fiber length, pull a thread from the fabric and untwist it; if the fibers are at least 1/2" long, the fabric will wear well. Rub two fabric scraps together to see if the fabric pills. To check for color fastness, rub the colored fabric with a piece of white fabric; no dye should come off on the white fabric.

Better quality cottons don't have a lot of sizing (a finish that makes the fabric appear firmer). As a fabric's sizing dissipates with repeated washings, the fabric loses its crisp hand.

Preparing Fabric

Cotton fibers don't shrink, but cotton fabric does, so preshrink the yardage. To preshrink, wash the fabric the same way you intend to launder the finished garment.

Make sure the fabric is on-grain; that is, that the crosswise and lengthwise threads are truly perpendicular to each other. If the cotton has a permanent finish, it's not possible to straighten the grain. If the fabric has a print and the grain is off, the print may be skewed once you straighten the fabric. Avoid print fabrics unless the threads are truly on-grain.

If it's difficult to tell the right side of the fabric from the wrong side, mark the wrong side with chalk to avoid confusion and a finished garment with shading differences.

Sewing Cotton

There are no hard-and-fast rules for sewing with cotton

because there so many fabric types. If the fabric does require special sewing techniques, it's because of the fabric type, not the fiber. Refer to fabric characteristics, such as ribbed or napped construction, decorative surfaces, loose weaves and fabric weight for sewing suggestions.


Use fabric weight as a guide when selecting the correct size needle and stitch length. Use a universal or standard-point needle on wovens, knits and synthetics. A ball-point needle is better for knit fabrics; the rounded tip slides between the knit loops instead of piercing them. Always test-stitch a sample seam on a scrap of the fabric. Use moderate tension on woven fabric, and reduce the tension on knits.

When choosing thread, try to match fabric and thread fibers. Cotton-wrapped polyester thread is fine for sewing cotton fabric.

If you're working with a very stretchy cotton knit, choose a 100% polyester thread because it stretches more than the cotton-wrapped polyester thread. When sewing woven cottons that don't need to stretch, a 100% cotton thread is perfect. This thread is lovely to work with and, although not as durable as the other two, produces flat seams.

Laundering & Garment Care

Most cotton fabrics can be laundered in the washing machine. They should be washed frequently, since they tend to absorb moisture and pick up dirt. Wash white items in hot water, medium colors in warm water and dark colors in cold water. Cotton will shrink more in hot water than cold, and fabric that's loosely woven shrinks more than tighter weaves.

Items with embossed designs and inner construction, such as a lining and shoulder pads, should be dry-cleaned. Loose knits, lingerie and fabrics with special finishes might also benefit from dry-cleaning. 

Fabric Weight	Needle Size	Stitch Length
Very Heavy	100/16 to 120/20	6-8 stitches per inch (3-4 mm)
Heavy	90/14 to 100/16	10 stitches per inch (2.5 mm)
Medium	70/10 to 80/12	12 stitches per inch (2 mm)
Light Weight	60/8 to 70/10	15-18 stitches per inch (1.5-1.75 mm)