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# Fiber Facts

Choosing the right fabric is one of the most important factors in selecting a textile item. This means choosing the right **fiber**.

There are many different fibers to choose from. Choosing the one that suits you and your needs is the hard part. You will be able to use fabrics more successfully and get the best results from something you buy with a few fiber facts in hand.

Fibers are used to make **yarns** that make the **fabric** you buy. There are two general types of fibers — natural and man-made. Cotton, silk, linen and wool are natural fibers. Polyesters, acrylics and nylons are man-mades. Some characteristics of each general type are listed below:

## Natural Fibers

- clean easily
- require pressing
- may shrink or stretch during laundering
- absorbent
- slow to dry

## Man-Made Fibers

- dry quickly
- hold shape well
- not absorbent
- resist "wear" wrinkles
- heat sensitive
- strong
- resist moths, mildew
- may pick up oily stains

Fibers can be classified even further. Fibers that have a similar chemical composition are given a family or **generic** name. Some examples of generic names are polyester, cotton, acrylic and nylon. Fibers with the same generic name have similar properties, i.e. washability, durability, etc. Common fibers are listed by their generic name in the table on the next page.

In addition to generic names, some fibers also have **tradenames** or **trademarks**, names used by manufacturers to identify their products. Dacron® is DuPont's registered trademark for polyester fiber, and Fortrel® is Celanese's trademark for its polyester fiber. They are essentially the same thing because they belong to the same generic fiber category — polyester. The table includes other examples of trademarks.

There are trademarks for all stages of fabric creation. Antron® refers to the fiber, Fluflon® to the yarn, Ultressa® to the fabric, and Sanforized® to the finish. Trademarks are

associated with quality. The manufacturer tests his product carefully to make sure it is good before his trademark is put on. Look for the trademark on the label.

More than one fiber can be used to make fabric. These types of fabrics are called **blends**. Fibers are blended to take advantage of the good characteristics of each fiber. For example, a polyester-cotton blend would combine the wrinkle and shrinkage resistance of polyester with the absorbency of cotton.

Here are some guidelines to blended fabrics:

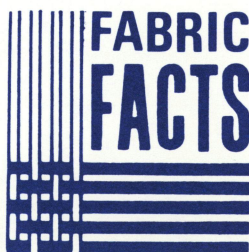
- If more than three fibers are used in one fabric, the usefulness of each is limited.
- At least 25% of a fiber must be used for its good characteristics to show in the fabric.

Exceptions:

- As little as 15% nylon will strengthen a blend.
- As little as 2% spandex will add effective elasticity or control.
- Small amounts of a fiber may be used for decorative or textural effects, such as surface loops.

Care requirements for blends are determined by the most delicate or heat sensitive fiber in the blend. For example, a cotton-polyester blend should be treated as a polyester. A blend of 50% cotton and 50% wool should be treated as wool, which requires low temperatures and gentle handling.

Often it is impossible to tell everything you need to know about a fabric by touching and looking at it. To make the right fabric choice you must **read the label**. Reading labels is the best way to know what you're getting for the money you spend.



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All products made from textile fibers must be labeled with the kind and percentages of fiber content in descending order. Fiber content must be listed on fabric bolts of 10 yards or more. A listing of fiber content is not required on remnants. This requirement is the result of the 1960 Textile Fiber Identification Act.

The generic name must be listed on the label if 5% or more of the fiber is present in the fabric. Listing tradenames is optional. However, since the tradename is important to the manufacturers that use them, they will most likely use their tradenames on their labels. The manufacturer's name or

identification number must also be given. In addition, labels may give information about fabric width and special finishes.

Care labels must be supplied with fabric yardage and sewn-in care labels must be on ready made garments as required by the FTC Care Labeling Rule effective July 3, 1972.

Fiber content gives clues to clothing serviceability if one is familiar with the durability, comfort and care requirements of fibers. With this knowledge a consumer will be better able to select a garment or fabric that will satisfy needs. The following chart will help you make your selections.

## FIBER FACTS

FIBER (Generic name, trademark examples)	Durability		Appearance		Comfort	Care Check the permanent care label or bolt-end instructions carefully. In addition:
	Abrasion resistance	Sunlight resistance	Pilling resistance	Wrinkle resistance	Absorbency	
<b>NATURAL FIBERS</b>						
<b>Cotton</b>	Good	Good	If pilling occurs, garments do not become un-sightly as pills often break off.	Low unless finish applied	Good	Attacked by mildew so protect stored items against dampness. Can withstand frequent hard laundering. Can be ironed at high temperatures. For best wear of linens, do not press sharp creases.
<b>Linen (Flax)</b>	Fair	Good		Low unless finish applied	Excellent	
<b>Silk</b>	Fair	Low	Good	Excellent	Excellent	Handle carefully when washing since they are weaker wet than dry. Use neutral or slightly alkaline soap. Chlorine bleaches damage fiber. Wool is damaged by dry heat so use steam. Never wash wool in hot water.
<b>Wool</b>	Fair	Fair	Excellent			
<b>SYNTHETIC FIBERS</b>						
<b>Acetate</b> (Avisco, Celeperm, Chromspun, Estron)	Low	Good	Excellent	Good, dry Poor, wet	Fair	Iron or press at low temperature. Weaker wet than dry. Avoid contact with nail polish remover.
<b>Acrylic</b> (Acrilan, Creslan, Orlon)	Fair	Excellent	Fair	Good	Low	Remove oily stains before washing. Cool rinse before spinning reduces wrinkling. Use moderately warm iron.
<b>Modacrylic</b> (Dynel, Verel)	Fair	Excellent	Fair	Good	Low	Remove oily stains before washing. Iron at extremely low temperature only.
<b>Nylon</b> (Antron, Caprolan, Enkalure)	Excellent	Fair	Low	Very good	Low	Remove oily stains before washing. Cool rinse reduces wrinkling and fabric softener prevents static electricity. Use a commercial nylon whitener to maintain whiteness.
<b>Olefin</b> (Herculon, Marvess)	Excellent	Good	Fair	Good	Low	Do not iron 100% olefin fiber. Touch up blends with lowest setting.
<b>Polyester</b> (Dacron, Encron, Fortrel, Kodel, Trevira)	Good	Good	Low	Good-excellent	Low	Remove oily stains before washing. Cool rinse reduces wrinkling. Fabric softener reduces static electricity.
<b>Rayon</b> (Avril, Bemberg, Fortisan, Zantrel)	Fair	Good	Excellent	Low unless finished	Excellent	Laundry carefully to prevent shrinkage or stretching. If in doubt about washability of garment, dry clean.
<b>Tri-acetate</b> (Arnel, Celanese)	Low	Low	Excellent	Very good	Low	Most can be machine washed and dried. If necessary, a hot iron can be used.

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