

Consumer Choices

Using textile labels

Reading textile labels can help you make wise decisions about what to purchase and help you care for items you already own.

Textile and apparel labels can help you consider alternative choices and make better buying decisions if you take time to read them. This publication gives a brief explanation about the various types of labels.

Fiber content labels

Fibers are the basic building blocks of most textile fabrics. Fiber content labels explain the fibers used in making textile products and must not be false, deceptive, or misleading. They should accompany clothing (except that for pets, hats, and shoes), and most household textiles (bedding, sleeping bags, curtains, draperies, floor covering, cushions, furniture coverings, towels, tablecloths), and items such as flags and umbrellas. Fiber content labels are required by national laws: the Wool Products Labeling Act; 1939, the Fur Products Labeling Act, 1951; the Textile Fiber Product Identification Act, 1960 (TFPIA); and their amendments. These laws are administered by the Federal Trade Commission (FTC) and require that manufacturers identify:

- all the fibers present that account for more than 5 percent of the product's weight
- each fiber class present in the item in percent descending order by weight;
- the country of origin—for both processing and manufacturing
- if made totally in the U.S. of U.S. materials by labeling "made in U.S.A"
- material origin for items made in U.S. of imported materials
- the manufacturer's name or Registered Identification Number (RN)
- whether wool is new or recycled

Natural fibers are labeled by their common name: cotton, linen, ramie, silk, and wool. Special varieties of cotton, such as Egyptian, Pima, Sea Island, or Upland may be named; if so, the percentage present in the fabric must be stated. Figure 1 shows cotton marketing symbols.

Popular wool marketing terms are "pure," meaning 100 percent; "virgin," meaning new; and "lambswool," meaning that it comes from a younger sheep, so the fabric may be softer to touch. Specialty fibers, such as angora, alpaca, camel, cashmere, llama, mink, and rabbit, may be called "wool" or listed by their specialty names, with the percentage present given. The Woolmark and Woolblend Mark are promotional symbols used by the Wool Bureau, Inc., a trade association, to promote wool use. The Woolmark is for 100 percent wool fabrics, and the Woolblend Mark products have a minimum of 60 percent pure wool with the balance either natural or manufactured fibers. See Figure 2. Generally, 25 percent or more by weight is needed to alter the appearance, texture, and performance of wool blend fabrics.

Fur product labels must be honest and state:

- the animal species
- the country of origin
- the name or Registered Identification Number of the manufacturer (RN)
- the inclusion of paws, tails, or reused fur
- dyeing, coloring, or bleaching of fur
- if the fur is used or damaged

Fiber and fur content labels are very important in international trade, especially with regard to country of origin. There are additional rules under the jurisdiction of the U.S. Customs Service that govern products with internationally-produced components.

Manufactured fibers (manmade of petro- and agrochemicals) used in apparel and furnishing textiles must be labeled according to generic class names set by the FTC or by the International Standards Organization (ISO). A generic name is given to manufactured fibers based on their chemical composition. This is similar to a family name. Individual trademark names may be given by manufacturers to accompany generic names to identify unique family members. The generic class and sub-class names (indented)

Figure 1. Seal of Cotton



The Seal of Cotton identifies products made of 100 percent U.S. upland cotton. It is the registered trademark of Cotton Incorporated, a research and marketing organization. Natural Blend Cotton must contain at least 60 percent of U.S. upland cotton.

Figure 2. Woolmark and Woolblend symbols



The Woolmark symbol identifies 100 percent wool products; products of 60 percent pure wool blended with other fibers may use the Woolblend Mark. This voluntary labeling is sponsored by The Wool Bureau, Inc., a wool producers' trade association.

are shown in Table 1. The generic classes most commonly found in wearing apparel are starred (*). Other classes listed are used for industrial purposes or protective clothing.

Table 1. Generic Classes

(*Shows the fibers most often used in apparel)

*Acetate	Olefin
*Triacetate	*Lastol
*Acrylic	*PLA
Anidex	*Polyester
Aramid	*Elaterelle-p
Azlon	*Rayon
Elastoester	*Lyocell
Fluoropolymer	*Rubber
Glass	*Lastile
Melamine	Saran
Metallic	*Spandex
*Modacrylic	Sulfar
Novoloid	Vinal
*Nylon	Vinyon
Nytril	

Fibers differ in appearance, texture, durability, and care required. In a fabric blend of two or more fibers, usually 15 percent of one fiber is needed to make a difference in the fabric texture or performance. But, with spandex and the newer stretch fibers, 3 percent or less can add elasticity or stretch.

Care labels

Permanent Care Labels (PCL) use symbols to explain how to care for wearing apparel and home sewing fabrics, so consumers need to

learn the basic symbols. See Figure 3 and 4. For piece goods, the care information is placed on the end of the bolt or roll of fabric.

The PCL symbol system is intended to assist international communication. For laundering, four symbols—in order—must be used: washing, bleaching, drying, and ironing. Dry-cleaning requires only the dry cleaning symbol. An "X" through any symbol means "Do not...[use the procedure]." Only the symbols that consumers are likely to need to know are shown in this publication. Dry cleaners use both fiber content labels and PCLs to learn the manufacturer's recommended care for textiles.

The FTC administers the Permanent Care Labeling Rule. It requires that textile products have labeling with one care instruction that works. The labels must:

- appear on garments in visible or easily found locations
- stay permanently attached for the life of the garment
- warn against any particular care procedure that might be harmful; and
- be based on reasonable evidence that the care procedure is safe for the item

Care labels may specify hand washing, machine washing, or dry cleaning. If ironing is needed for appearance, instructions must be given, but if hot ironing is safe, temperatures need not be listed. If bleaches are safe to use on a regular basis, then their mention is not required. If no bleach is safe, then the label must say "no bleach." For dry-cleaning, if some solvents are not safe, then a recommended one must be listed.

The symbol system for PCLs was created by the American Society for Testing and Materials (ASTM) and it assumes that consumers will understand common care procedures. For example, "permanent press" means that a cool-down cycle or rinse in the washer will be used before spinning to prevent wrinkling. "Drip dry" means to hang without wringing or spinning that could introduce wrinkling. "Drying flat" means to lay out the item horizontally for drying. The symbol system is not exactly the same as the care label system used in European countries under the ISO, but many of the symbols are similar in the two systems.

Several classes of merchandise are exempt from PCL rules. These are:

- disposables
- garments needing no care
- furnishing textiles

- fur and leather goods
- special decorative or ornamental items
- remnants cut and shipped by the manufacturer (mill ends)
- reversible garments
- imported goods in which the harshest procedures are safe
- items for commercial use to institutional buyers
- items with a special exemption obtained by the manufacturer

Flammability labels

Each year many burn injuries and deaths occur because clothing catches fire. If clothing ignites, the burn injury is often severe, resulting in permanent scarring. The Consumer Product Safety Commission administers the Flammable Fabrics Act and other rules that are aimed at keeping the most dangerously flammable fabrics off the consumer market. However, most household and apparel fabrics will burn when in contact with a flame or heat source. Children’s sleepwear, mattresses, and carpets are governed by flammability standards that require more rigorous tests than that required for other wearing apparel and home furnishings. If clothing is flame resistant it is usually labeled to say so.

Labels on children’s sleepwear must warn if the fabric is not flame resistant. Recently the children’s sleepwear flammability standard was changed so that cotton may be used in sleepwear instead of flame-resistant fibers—only if the sleepwear is snug-fitting. For example, the label may state: “WEAR SNUG FITTING. NOT FLAME RESISTANT.” [Cotton and most other apparel fibers catch fire quickly and burn rapidly.]

Parents and others may prefer cotton for its appearance, texture, and absorbency, but it is easily ignited by contact with a candle, space heater, or other heat source, if clothing fits loosely. Flame resistant fibers are slow to ignite, burn slowly, and usually self-extinguish when the source of heat is removed, thus providing a little extra time to put out a fire and prevent burn injury. For more information about fabric flammability see Facts about Fabric Flammability, NCR-174, or www.cpsc.gov.

Shrinkage labels

Fabrics may shrink or stretch out of shape during use and care, but generally blends that contain synthetic fibers will shrink less than will 100 percent cotton or wool. However, blends with synthetic fibers are heat sensitive and may shrink in the dryer if overheated. Trademarked finishes to reduce fabric shrinkage

Figure 3. ASTM Symbol System—Basic Symbols



Figure 4. ASTM Symbol System—Additional Symbols

W A S H			
●	water temperature up to 85°F=cold washing; low		machine wash permanent press
●●	water temperature up to 105°F= cool washing; medium		machine wash gentle
●●●	water temperature up to 120°F= warm washing; high		hand wash
	do not wring		
B L E A C H			
	non-chlorine, all fabric bleach only		do not bleach
D R Y			
	permanent press		dry flat
	delicate/gentle		line dry
	drip dry		dry in shade
I R O N			
	low iron		high iron
	medium iron		no steam
D R Y C L E A N			
	dry clean		do not dry clean



Figure 5. Crafted with Pride in U.S.A.

sometimes are noted on labels. General terms describing shrinkage are:

- 3 percent shrinkage—equivalent to reducing the garment by about one size, altering fit.
- prewashed—less likely to shrink when washed; with denim, this usually means a soft, faded look.
- preshrunk—a meaningless term that is not helpful. It fails to tell how much more the product will shrink when washed again.

Union labels

The Union of Needletrades, Industrial and Textile Employees (UNITE) represents about 300,000 workers in the textile and garment industries, resulting from the merger of the International Ladies Garment Worker's Union (ILGWU) and the Amalgamated Clothing and Textile Worker's Union. Their aim is to educate consumers about wages and working conditions in clothing production at home and abroad. See www.uniteunion.org.

Crafted with Pride labels

Crafted with Pride in U.S.A. is a private council that aims to educate consumers about the importance of U. S. manufacturing "to the long term well-being of the United States and its people." It campaigns to improve the competitive position of U.S. manufacturers in the international marketplace. See www.craftedwithpride.org.

Other common label terms

Carded: Shorter, thicker cotton fibers provide a soft, durable fabric.

Combed: Longer, straight cotton fibers lie parallel and provide smooth, lustrous, and strong fabric.

Permanent or durable press: a chemical treatment for cotton fabrics that increases wrinkle resistance.

Pima: a high quality natural cotton fiber that is long, lustrous, and smooth.

Pure: only one fiber type is used in the fabric. "Pure wool" is 100 percent wool and not a blend.

Ramie: a cellulosic fiber grown in Asia that has characteristics similar to linen.

Raw silk: a rather stiff, crisp textured fabric that has not been degummed (boiled) to remove the natural gum from the silkworm.

Upland cotton: the cotton plant variety most commonly grown in the U. S. that is valued for its fiber length, diameter, and uniformity.

Woolen: fabric is thick and fuzzy because wool fibers in yarns are short and partially straightened.

Worsted: fabric is smooth, lustrous, and strong because fibers in wool yarns are long, and combed to straighten

Read before you buy

Read the labels before you buy textiles and apparel. Use the labels to make informed choices. Follow care labels as you wear and care for items. Provide appropriate instructions to dry cleaners about stains and any cautionary statements on the labels so that they can serve you better. You pay for the costs of labeling, you might as well get as much benefit as you can from it.

References

Collier, B. J., and Tortora, P.G. (2000) *Understanding Textiles*, 6th Edition, Prentice Hall, Upper Saddle River, New Jersey.

Consumer Product Safety Commission, (2002) *Code of Federal Regulations, Commercial Practices 16 Part 1602-1632. Subchapter D—Flammable Fabrics Act Regulations*, Rev. July 1.

Federal Trade Commission (2003) "Textile Wool, Fur, Apparel Matters." Web page that includes documentation for textile, fur, and care labeling laws and rules. www.ftc.gov/os/statutes/textilejump.htm.

Federal Trade Commission (2003) "Threading Your Way Through the Labeling Requirements Under the Textile and Wool Acts," A publication for business to explain labeling rules. www.ftc.gov/bcp/conline/pubs/buspubs/thread.htm.

Kadolph, S. and Langford, A., (2002) *Textiles*. 9th Edition. Prentice Hall, Upper Saddle River, New Jersey.

Stone, J. and Kadolph, S. (2003) *Facts about Fabric Flammability*, NCR 174, Iowa State University Extension, Ames, Iowa

ASTM symbols provided by Federal Trade Commission Bureau of Consumer Protection.

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