



NON-WOVEN OR NON-KNITTED FABRICS - PAGE 1

There are numerous methods of making fabrics other than weaving and knitting, but they are not often used for apparel fabrics. Some of the reasons other fabrics are not in common use for apparel are that they are expensive to produce, the durability of the fabric limits its use, or the fabric produced is intended only for specialty use.

Felt and non-woven fabrics are examples of fabric constructed directly from fiber and without the use of yarns, looms, or knitting machines.

Felt

To manufacture felt, it is necessary to use fibers that will interlock and shrink when heat, moisture, and pressure are applied to form a solid fabric mass. Wool, hair, and fur fibers have the natural characteristics necessary to respond to these actions of the felting process. Felt is also made by combining rayon or other manufactured fibers with wool. However, to produce acceptable felt, at least 50 percent of the fiber content must be wool or hair fibers. There are also felt-like materials on the market that are made from fibers other than wool, particularly synthetics, that are produced by the needle-punch method rather than the felting process.

Felts can be made in a variety of thicknesses, are easy to shape, will not ravel, have good shock and sound absorbency, and can be treated with many finishes. Some disadvantages of felt are that it has little or no ability to recover if the fabric is stretched out of shape. Its fibers will pull apart if the fabric receives too much stress, and holes cannot be mended satisfactorily.

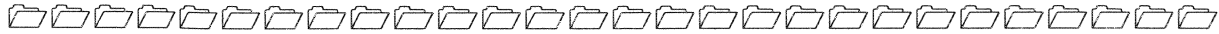
The diverse uses of felt range from hats and other wearing apparel to pool table surfaces and industrial purposes. Care procedures for felt are similar to those recommended for other wool fabrics. Because felt is made directly from fibers rather than from yarns, lightweight felts should be handled carefully without twisting or strenuous pulling in the care process.

NON-WOVEN OR KNITTED METHODS

The first non-woven fabrics from manufactured fibers were produced in 1942. Since that time, major developments in manufactured fibers and manufacturing equipment have increased the variety of non-wovens and the ways in which they are used. All non-woven fabrics are made directly from fibers. How the fibers are formed into the fabrics determines the type of non-woven fabric produced. Some non-woven fabrics are intended to be disposable, but others are used for durable products.

The **bonded web method** is used to produce disposable products such as hospital and hair salon garments, diapers, bed sheets, tablecloths, and cleaning wipes.

The **fusible non-woven method** is used to produce interfacings and for fusing two layers of fabric in apparel manufacture.



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The **spunbonded method** is used to produce interfacing for apparel, disposable protective clothing, shoe linings, backing for wall paper and carpet, and road construction.

A very complex process is used to manufacture a special group of non-wovens—synthetic suedes and leathers. The most intricate adaptation of this process is used to produce the ultra-high-fashion, suede-like fabrics, such as Ultrasuede, Amara, and Lamous.

There has been a continued growth in use of non-woven fabrics, and many experts predict that growth will increase for some time. The use of non-wovens for small items, such as diapers, ribbons, and bandages, has virtually eliminated use of traditional materials for these items. However, the newest field and the greatest growth areas for the non-wovens are in industrial and civil engineering applications. The geotextiles are made from one type of olefin—polypropylene. The grid construction of geotextile material, its strength, and its resistance to chemicals and to all weather conditions make it ideal for use in many types of construction. The mesh size of these rugged but flexible textiles varies greatly, depending on the projects in which they are used. Geotextiles are used for reinforcement in railroad beds, highways and streets, building foundations, and landscape projects. You may have seen orange geotextiles used to fence off construction sites.

If a non-woven fabric has been produced for a one-time use and is disposable; care information is not important. However, if the non-woven fabric is intended for durable use, follow the manufacturer's recommendation for care procedures. Acceptable performance of non-woven interfacings for apparel will be more successfully achieved if they are compatible with the outer garment fabric.