

SECTION VI

FABRIC CONSTRUCTION—FABRIC TYPE

The discussion of fabrics on the following pages is in no way complete on every type of fabric being produced and sold currently. The samples do represent many of the fabrics that are drycleanable and wetcleanable. Some represent fabrics that have limited serviceability in use and in drycleaning or wetcleaning.

To develop an understanding of the way fabrics behave as they do, we have discussed fabric finishes and fabric designs first because these finishes and designs may be applied to many types of fabric constructions.

Fabric construction also plays a very important role in fabric serviceability. We shall describe briefly the basic methods of fabric constructions that are shown on the following pages.

Basically, there are six methods by which fabrics are made. They are:

1. Felting
2. Braiding
3. Netting and lace
4. Knitting
5. Weaving
6. Bonding

1. *Felting*: Felting is the oldest method of fabric construction. It was known before weaving. Fibers and hair are compressed together by the application of heat, moisture, and pressure. (Example, page 295.)

2. *Braiding*: Three or more yarns are doubled back and interwoven, one yarn over another, to form a fabric. An early example of braiding is the hand-made braided rug. Today, complex braids are made and used as trim, or fashioned into unusual garments.

3. *Netting and lace*: Lace developed into a fine art in Italy in 1300-1500. The bobbinet machine was invented as early as 1808. Lace was first made by machine in 1831. There are many books on lace making. We shall not attempt to discuss the methods by which lace is made, except to mention several of the most common types of machine-made laces sold today:

a. Leaver method: Alençon, Chantilly, Cluny, Filet, Maline, Milan, Tulle, Valenciennes.

b. Bobbinet method: Commercial nets, Filet, Maline, Net appliqué, Point d'esprit, Tulle.

c. Nottingham method: Filet, Net, Nottingham lace.

d. Schiffli method: Breton, Cluny, Point de Venise, Richelieu.

And, of course, there are many types of hand-made laces.

4. *Knitting*: Knitting came into being in the 16th century. There are two methods of making knitted fabrics. We shall describe them briefly, as there are many good books written on the production of knitted fabrics. For our purpose, we shall classify them as follows:

a. *Weft knitting*: This is a circular knit with loops running across the fabric. There are several basic stitches, plain, purl, rib, interlock, and jacquard.

b. *Warp knitting*: This is the type of knitting that can be done by hand or by machine. Warp knitted fabrics are more closely knitted, having four times as many

stitches per inch as weft knitted fabrics. There are three basic stitches used in warp knits:

(1) Single bar tricot—a yarn is knitted in one direction and then knitted in reverse.

(2) Two bar tricot—this method uses two sets of yarns, one knitted in one direction and the other in the opposite direction.

(3) Milanese—two sets of yarns are

used but there is no reversal of direction. Each set of yarns is knitted in one direction, one toward the right, the other toward the left.

Knitted fabrics can be made flat or tubular. When the shaping is done by dropping stitches, it can be recognized by the “fashion marks.” If a knitted fabric is made by the tubular or circular method, the needles can be set tighter, making the fabric narrower. No fashion marks are visible.

DIAGRAMS OF BASIC KNITS

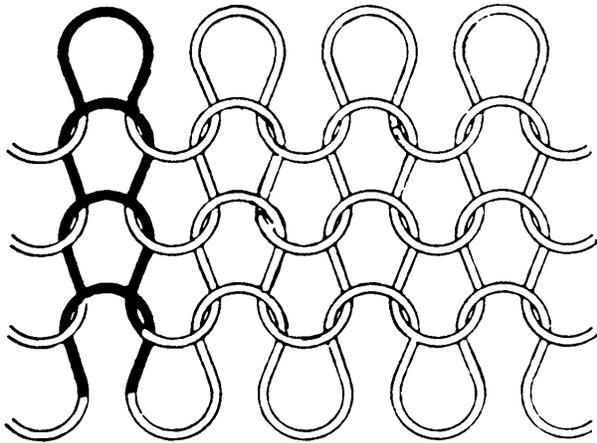


Fig. 1

The loops that run lengthwise of a knit fabric are called "wales."

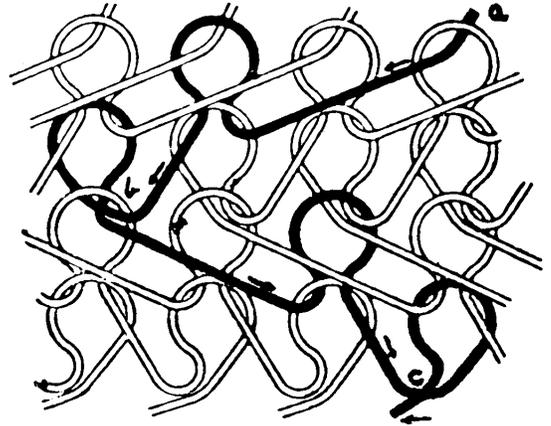


Fig. 4

Single warp tricot knit stitch.

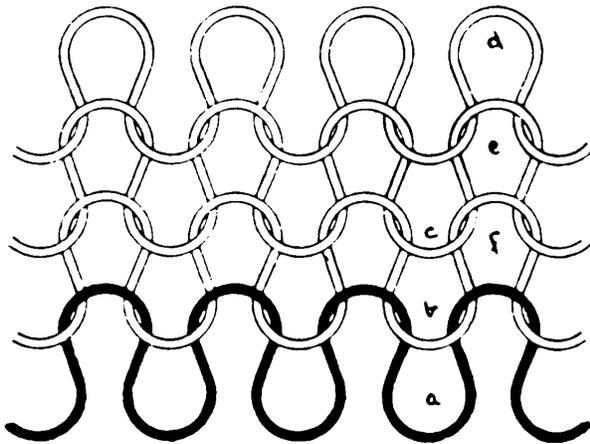


Fig. 2

The loops that run crosswise of a knit fabric are called "courses."

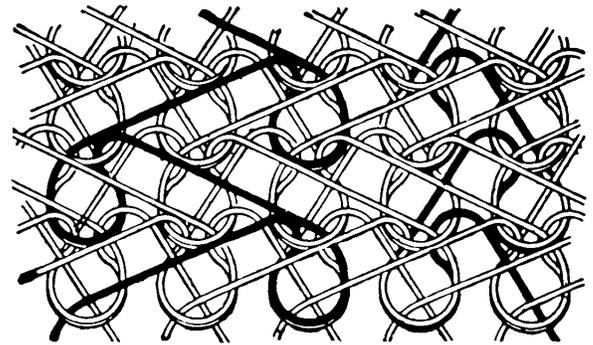


Fig. 5

Double warp tricot knit stitch.

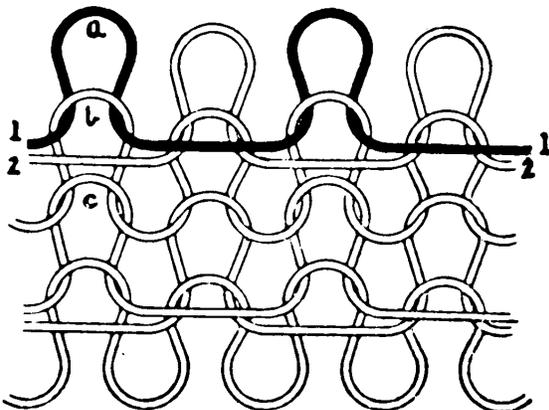


Fig. 3

Run-resist circular knit stitch.

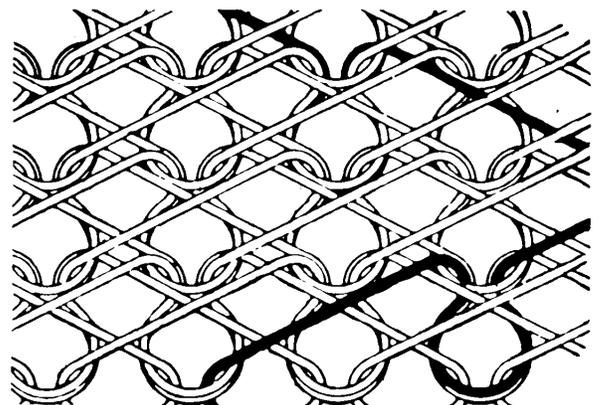


Fig. 6

The Milanese stitch.

Diagrams, Courtesy of the American Bemberg Corporation.

5. *Weaving*—Woven fabrics are made by the interlacing of two or more sets of yarns at right angles to produce a fabric. The lengthwise yarn is called “warp,” the crosswise yarn, “filling.”

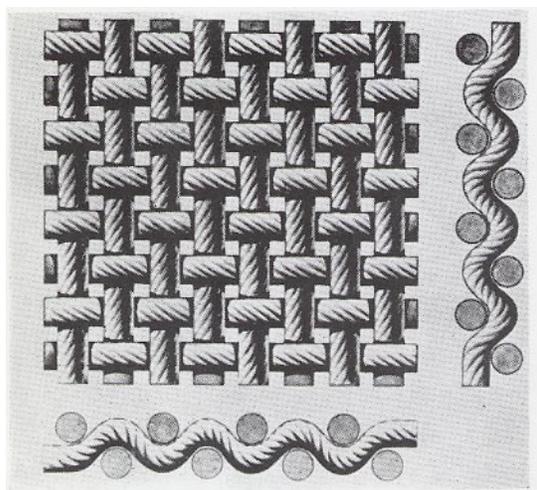


Fig. 7
Plain Weave

The common types of weaves are the *plain* weave with variations to make a *rib* weave or a *basket* weave; the *twill* weave; the *satin* weave; the *leno* weave; the *jacquard* weave; the simple figure or *dobby* weave, the *pile* weave, and the *double cloth* weave.

Plain Weave. The simplest of all weaves is the plain weave. Each filling yarn passes alternately over and under one warp yarn. Each warp yarn passes alternately over and under each filling yarn.

In making a crepe fabric, the principle of contraction is used. The non-lustrous crinkly surface hides the fact that a crepe fabric is a plain weave. The filling yarns may be of high twist and the warp yarns of low twist, or vice-versa. Another method is to give the warp yarns a right-hand twist and the filling yarns a left-hand twist. Still another method is to vary the tension of both the warp and filling yarns on the loom.

Some examples of plain weave fabrics are crepes, shantung, organdy.

Rib Weave: This is a variation of a plain weave. The filling yarns are larger in diameter than the warp yarns. A rib weave produces a fabric in which fewer yarns per square inch are visible on the surface. Examples of rib weave are: poplin, faille, bengaline, grosgrain, ottoman.

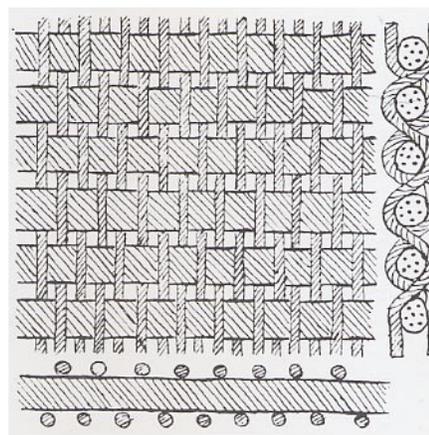


Fig. 8
Rib Weave

Basket Weave: This is a variation of the plain weave. In this construction two or more yarns are used in both the warp and filling directions. But these groups of yarns are woven as one, producing a basket effect. Examples of basket weave fabrics are monk's cloth, acetate sharkskin, basket-weave coating fabrics, hopsacking.

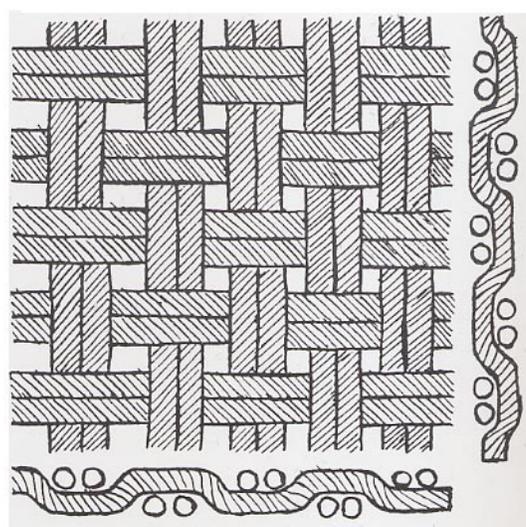


Fig. 9
Basket Weave

Twill Weave. This is characterized by diagonal ridges formed by yarns which are exposed on the surface. These may vary in angle from a low slope to a very steep slope.

Twill weaves are closer in texture, heavier, and sturdier than plain weaves. They can be produced also in many fancy designs. A common variation of the twill weave is the herringbone, Glen plaid, hound's tooth, gun club, and Shepherd's check.

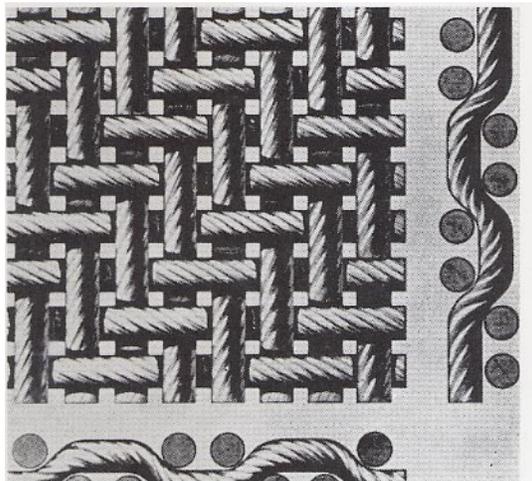


Fig. 10
Twill Weave

Satin Weave. The satin weave is characterized by floating yarns used to produce a high luster on one side of the fabric.

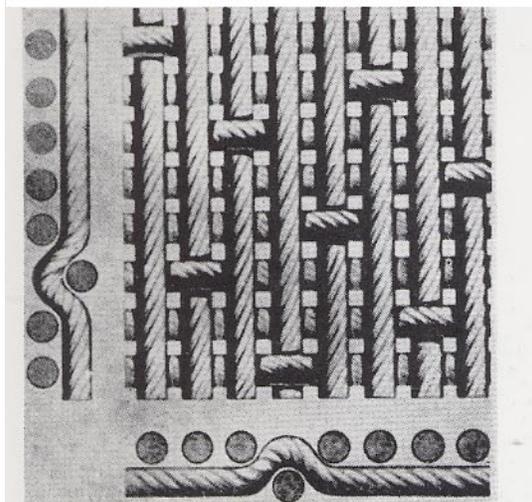


Fig. 11
Satin Weave

Warp yarns of low twist float or pass over four or more filling yarns. The low twist and the floating of the warp yarns, together with the fiber content, give a high degree of light reflection. High twist yarns may be used for the filling.

There are many weights of satin fabrics, from "chiffon" satin to heavy "Duchesse" satin.

The *sateen* weave is similar to a satin construction. The difference is that in the sateen weave the *filling* yarns float and are visible on the surface of the fabric. Example: Cotton sateen.

Leno Weave. In the leno weave, warp yarns in pairs are crossed over each other in the form of a figure 8. The filling yarn passes through the loops of the figure 8. Example: Marquissette.

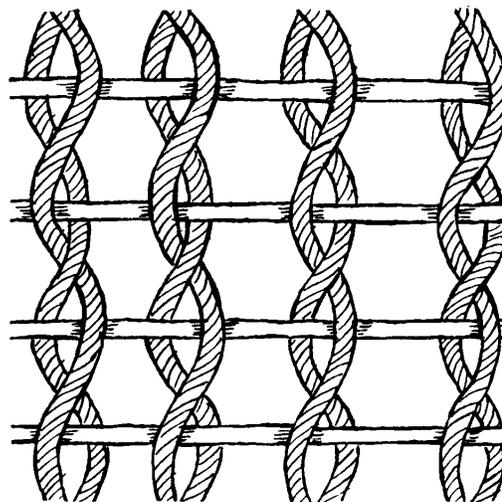


Fig. 12
Leno Weave

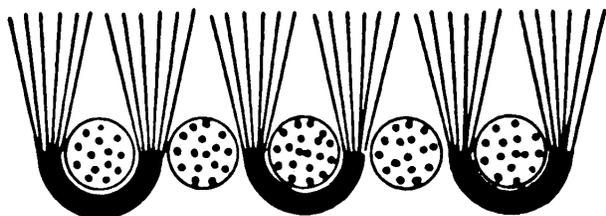
Jacquard Figure Weave. Elaborate designs are woven on intricately constructed looms, called a Jacquard loom. It takes weeks to prepare the loom for intricate patterns. Examples: Brocade, damask.

Dobby Figure Weaves. Small designs can be woven inexpensively by placing a doobby attachment to a plain harness loom. Simple, small geometric designs or figures are repeated often throughout the fabric. Examples: Madras, honeycomb, bird's eye.

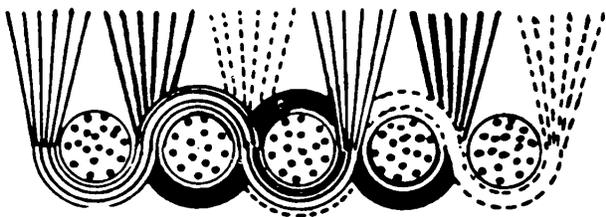
Pile Weave. Pile fabrics are made with three sets of yarns. One set is perpendicular to the other two. The back of the fabric may be a plain, twill, or satin weave. Examples: Velvet, velveteen, plush, corduroy.

There are two types of pile weaves. They are the "U" or "V" weave, and the "W" weave. In making the "U" or "V" weave, the extra

set of warp yarns is cut *each time* it passes over a filling yarn. It produces a fabric that looks like Fig. 13. The "W" weave is produced by cutting the extra set of warp yarns *every other time* it passes over the filling yarns. It produces a fabric that looks like Fig. 13.



Cross-section "V" weave



"W" weave velvet

Fig. 13

It can be seen from these drawings that the "W" weave is the more durable of the two. The pile is held in place by *two* filling yarns.

In some fabrics like terry cloth and fris e the pile is not cut. It is also possible to have cut and uncut pile in the same fabric.

Sometimes a pile fabric is made with two pieces of cloth woven at the same time, face to face. A knife on the loom cuts the binding yarn, thus producing fabrics with a short pile surface. When a fabric is not cut apart, it is called a *Double Cloth Weave*. Examples: Double-faced ribbons, coating and jacket fabrics, blankets.

6. *Bonding*: Glazed wadding, the forerunner of today's non-woven fabric, was made as early as 1860. Today, hundreds of patents cover techniques and processes for the manufacture of non-woven fabrics. Fibers used include wool, certain hairs, rayon, acetate, and the synthetic fibers, such as nylon, Orlon, Acrilan, Dacron, and others. Fibers are blended to form a web and then bonded by one of four methods:

- (1) The use of thermoplastic fibers, heat and pressure.
- (2) Discontinuous bonding applied in strips so that most of the fabric is not bonded.
- (3) Saturation of the complete web or mat with the adhesive.
- (4) Spraying the carded webs or mats with an adhesive or solvent, and drying without pressure.

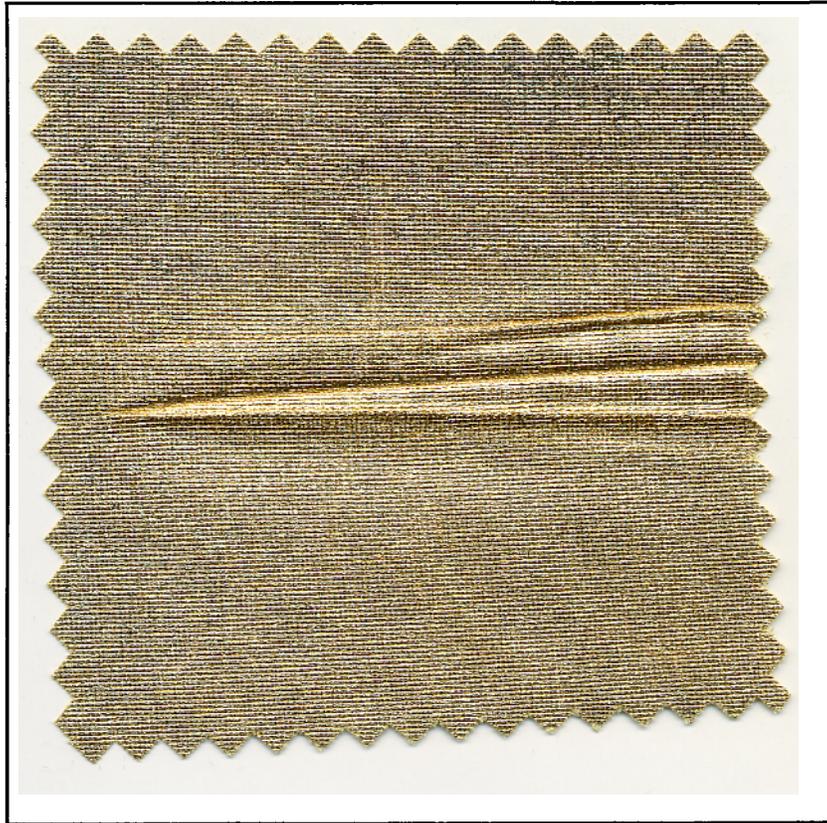
SECTION VII

A.

FABRIC GROUPINGS—COATED FABRICS

The first "coated fabric" was probably "oilcloth." Since the production of this fabric by relatively simple means, the coated fabrics field has expanded to a large and important segment of the textile industry. The fabrics that fall into this classification are varied in nature, but they may be classed for our discussion as follows:

1. Fabrics used for dresses or trim:
 - (a) Metallic plated jersey
 - (b) Flocked velvet
2. Fabrics used for dresses, coats, jackets and trim:
 - (a) Flocked suede fabrics:
 - (1) Coated method using rubber or an acrylic base
 - (2) Expanded vinyl method
 - (b) Smooth or textured surface simulated leather:
 - (1) Coated method
 - (2) Expanded vinyl method
 - (3) Laminated method
3. Rainwear fabrics for coats, capes and jackets:
 - (a) Synthetic rubber coating
 - (b) Vinyl coating
 - (c) Microporus finish (see page 131).
4. Reflective linings for coats and jackets.
5. Drapery linings:
 - (a) Reflective
 - (b) Opaque
6. Self-lined drapery fabrics.



Nylon Tricot Knit—gold plated

METALLIC PLATED FABRICS

Definition: Nylon or acetate tricot knit fabrics are coated on one side with silver or gold particles in a resin binder.

Advantages:

- This is a soft, luxurious fabric. It cannot be abused in wear.
- These plated fabrics are quite expensive; hence they are used in high-styles and unusual garment design.
- Plated fabrics may be considered fragile, requiring extreme care in dry-cleaning, stain and spot removal, and finishing.

Disadvantages:

- Plated fabrics abraid easily. This may occur as light streaks on some areas. Creasing of the fabric may result in streaks.
- Some of the spotting agents used to remove spots and stains will also remove the metallic particles.
- The brightness of the fabric may be lost in wear and cleaning.
- The fabric cannot be ironed on the right side as the iron will stick to it.

FLOCKED VELVET

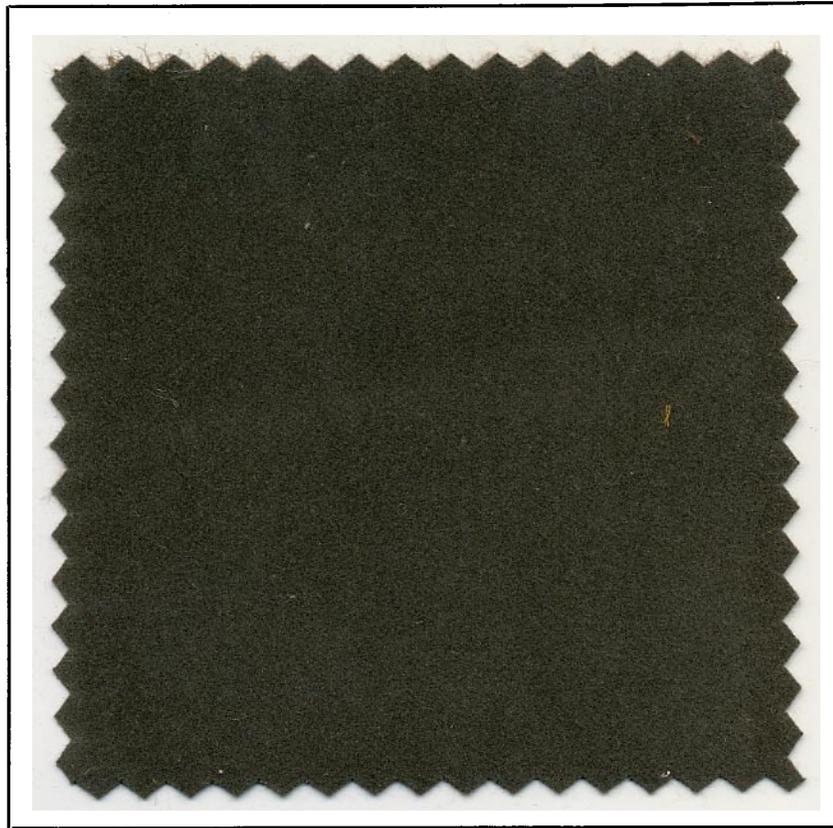
Definition: A flocked velvet is made by binding small particles of fibers (called “flock”) to the entire surface of a taffeta fabric. The finished fabric looks very much like a woven velveteen or velvet.

- Advantages:**
- Flocked velvet is used most widely to make ribbons.
 - Flocked velvet is used frequently as trim on dresses, negligees, housecoats, suits. It is used as contrasting trim for collars, cuffs, belts, decorative designs.
 - Flocked velvets are washable and wetcleanable.

- Disadvantages:**
- Garment makers sometimes use flocked velvet in garment designs or with fabrics that are drycleanable. It is sometimes very difficult to recognize this fabric from a woven velvet. The adhesive used to make it is solvent-soluble. Hence, in drycleaning, the flock is removed from the base fabric.



FLOCKED VELVET

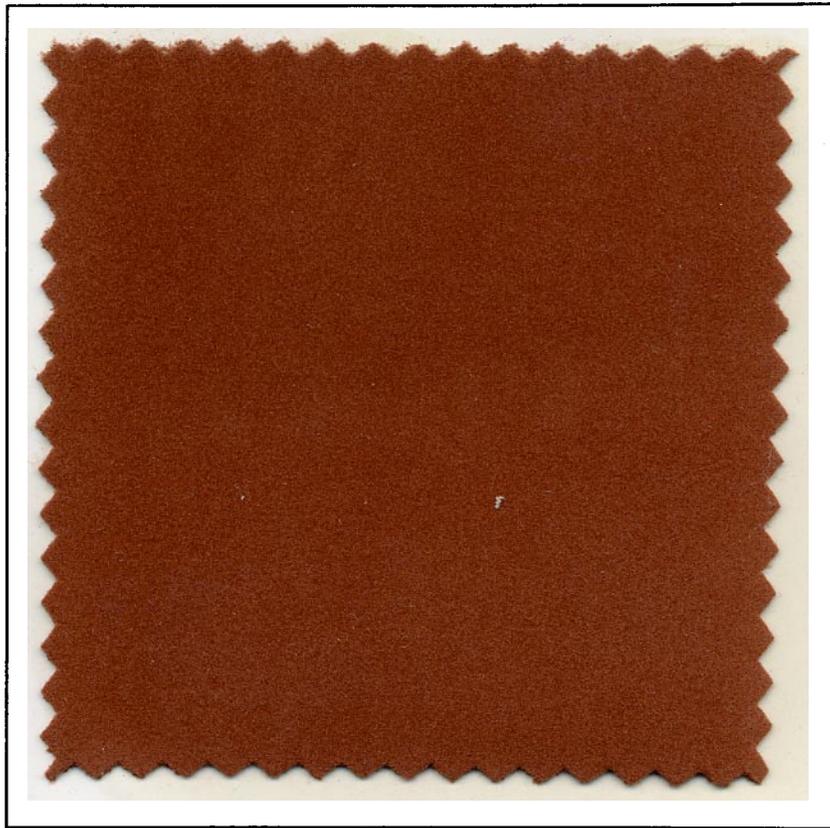


FLOCKED SUEDE FABRICS (Coated Method)

Definition: A flocked fabric is made by binding small particles of fibers (called “flock”) to the entire surface of a woven fabric.

- Advantages:**
- This type of fabric construction permits a wide variation in achieving different surface effects. A fine short flock on the surface may be used to create a suede effect; a long flock may be used to create the effect of a deep pile upholstery fabric.
 - Some flocked fabrics are used in drycleanable garment constructions, such as jackets, lining fabrics in coats and jackets, and skirts and jumpers.
 - Flocked pile fabrics may be used as trim, for shoes and bags.
 - A great improvement has been made in the performance of flocked surface suedes by using an acrylic adhesive to bind the flock to the base fabric.

- Disadvantages:**
- Some flocked suedes made with a neoprene adhesive have caused problems: change of color, loss of flock, loss of tensile strength, stiffening.
 - There is a limit to what can be done to remove spots and stains, as some of the reagents needed to remove many types of stains also remove the flock from the base fabric.



FLOCKED SUEDE FABRICS (Expanded Vinyl Method)

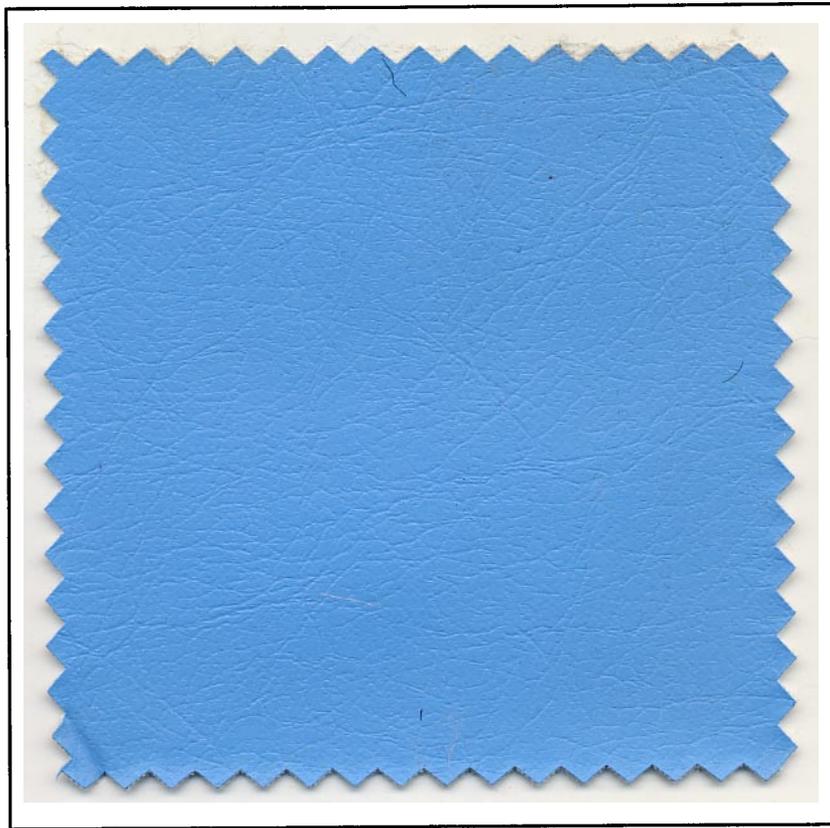
Definition: A flocked expanded vinyl fabric is made by heating a vinyl or plastic material. This expands the material into a sponge-like cellular structure with a soft, plastic hand. This material is bonded to a knitted background fabric. Short lengths of cotton or nylon, called “flock” are bonded to the surface. The fabric has the appearance of genuine suede.

- Advantages:**
- Expanded vinyl suede fabrics are used to make coats, jackets, vests, caps, dresses, jumpers, suits, slacks, shorts.
 - Knitted and woven fabrics may be combined with expanded vinyl suede in a variety of garment designs.
 - Expanded vinyl suede has a good appearance and hand. It is less expensive than genuine suede.
 - Nylon flock gives an extra factor of durability because of its resistance to rubbing and abrasion.

Disadvantages:

- A garment made of knitted or woven fabric combined with expanded vinyl suede presents a problem in cleaning. Shrinkage may occur in wetcleaning.

- Sueded expanded vinyls cannot be drycleaned. Drycleaning may result in shrinkage, stiffening, separation of the flock from the base fabric.
- There is a limit to what can be done to remove spots and stains from vinyl suedes. Some of the spotting agents used to remove many types of stains also remove the flock from the base fabric.
- If shrinkage occurs, it is impossible to shape back to the original size.



Crushed Grain—The Davoe Corp.

SMOOTH OR TEXTURED SURFACE SIMULATED LEATHER (Coated Method)

Definition: Simulated leather is a term used to describe a coated fabric that has the look, feel, and pliability of genuine leather. The base fabric may be knitted or woven of a variety of fabric constructions. Originally these coatings were a nitrocellulose product called pyroxylin. For a number of years vinyls have been used for apparel and upholstery applications. Various leather simulations are achieved by embossing.

Advantages:

- Simulated leather is adaptable to a wide range of garment constructions for men, women, and children.
- Simulated leather serves as an effective trim with a variety of woven and knitted fabrics.
- It is used widely to reinforce sleeves, elbows, and knees of active sports garments.
- Performance satisfaction depends on fabric combinations and garment constructions. Simulated leather garments should be wetcleaned.

Disadvantages:

- Simulated leather cannot be drycleaned. Drycleaning removes the solvent-soluble carrier for the resin that is used to coat these fabrics. Manufacturers are making improvements in the performance of the smooth surface simulated leathers. Some manufacturers claim their product is drycleanable.

SMOOTH OR TEXTURED SURFACE SIMULATED LEATHER (Expanded Vinyl Method)

Definition: A smooth-surfaced expanded vinyl fabric is made by applying the coating with foaming agent. This expands the material into a sponge-like cellular structure with a soft pliable hand. This material is bonded to a knitted background. The surface of the fabric can be smooth or textured. The surface can be embossed to resemble the many different markings of grain leather.

Advantages:

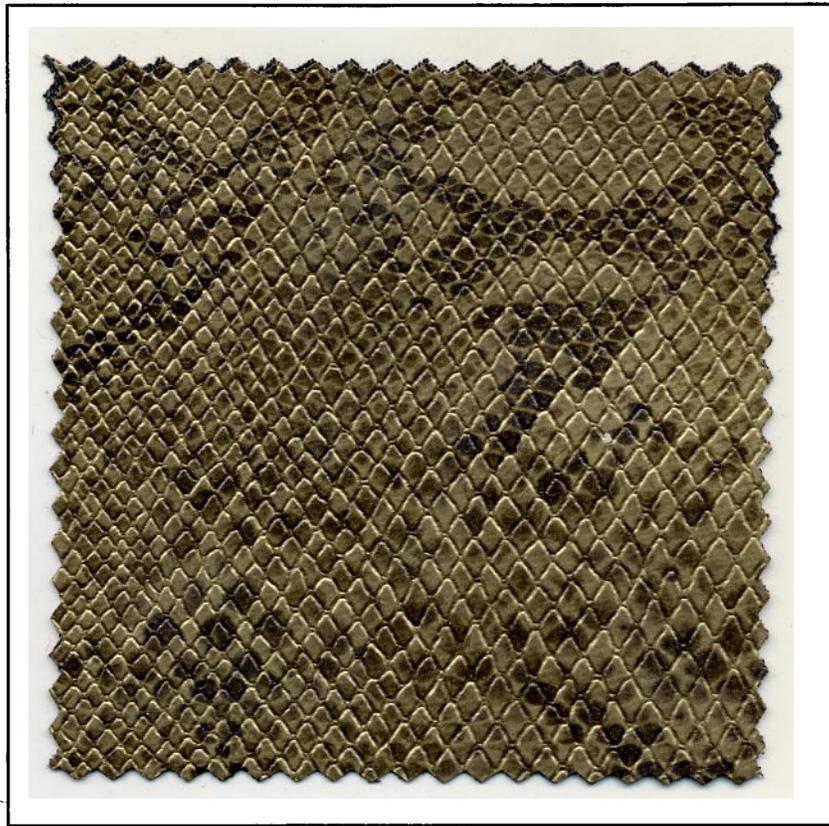
- This group of fabrics may be used to make coats, jackets, vests, caps, gloves. It may be combined with woven or knitted fabrics in a variety of garment designs.
- The fabrics are soft, pliable. They have a good appearance and hand.
- Smooth or textured leathers of the expanded vinyl type should be wet-cleaned unless labelled drycleanable.

Disadvantages:

- Garments that combine drycleanable fabrics with smooth or textured expanded vinyl fabric may present a problem in cleaning. Shrinkage of the drycleanable fabric may occur in wetcleaning.
- If excessive shrinkage occurs in the expanded vinyl fabric, it is impossible in most cases to shape it back to size.
- Some stains such as dye, ink, lipstick are difficult if not impossible to remove without causing damage to the surface of the fabric.

Burlmere, Goodall Vinyl Fabrics





VK Royal Python—The Davoe Corp.

SMOOTH OR TEXTURED SURFACE SIMULATED LEATHER (Lamination Method)

Definition: Smooth or textured simulated leathers are made by laminating a sheet of vinyl film with an adhesive to a woven or knitted background fabric. The surface of the film may be embossed to resemble the grain of any genuine leather. This is done by calendering or fusing the two parts together.

- Advantages:**
- Simulated leathers made by the lamination method may be used for rainwear, jackets, hats. They are used widely for making shoes and handbags.
 - Laminated simulated leathers may be combined with drycleanable fabric in garment design or be used as trim.
 - The fabrics have a good appearance and hand. They are less expensive than genuine leather.
 - The laminated leathers should be wetcleaned.

- Disadvantages:**
- Laminated simulated leathers should not be drycleaned.
 - Drycleaning may cause stiffening in some fabrics, partial or complete separation of film from fabric in others.

COATED OUTERWEAR FABRICS

Definition: Medium-weight fabrics, usually cotton, are coated on the back with a rubberized coating or a vinyl coating to make the fabric weather-resistant.

Advantages:

- These fabrics are light in weight, and warm. They do not permit air or rain to pass through the surface of the fabric. They keep the wearer warm and dry.

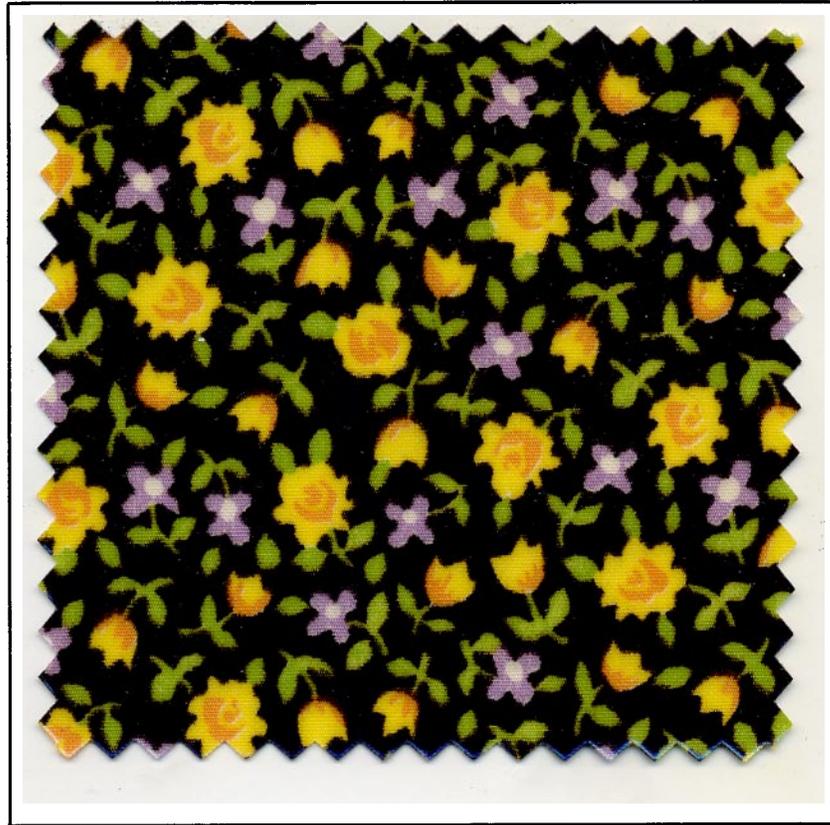
Disadvantages:

- Vinyl-coated fabrics stiffen in drycleaning. They can be wetcleaned. (See page 409.)
- Rubberized coatings are best cleaned by the petroleum solvent method of drycleaning. These coatings may be affected by some of the spotting chemicals used to remove spots or stains.

Norpole, 100% nylon taffeta, Rubber coated—Pepperell Mfg. Co.



COATED OUTERWEAR FABRICS



100% Cotton, Vinyl coated

COATED RAINWEAR FABRICS

Definition: Fabrics of cotton, silk, rayon, nylon, Dacron are thinly coated on the back to impart water resistance to the fabric.

Advantages:

- Some of these fabrics are light in weight. They are comfortable to wear; they pack easily. Many attractive colors and designs are available.

Disadvantages:

- Some of these fabrics are warm and uncomfortable in warm weather; cold to wear in cold weather.
- Some of these coated fabrics crack and yellow with age.
- The tear strength is low by comparison with many fabrics used in outer wear garments. They tear easily.
- These fabrics cannot be drycleaned as they stiffen in cleaning. They can be wetcleaned.

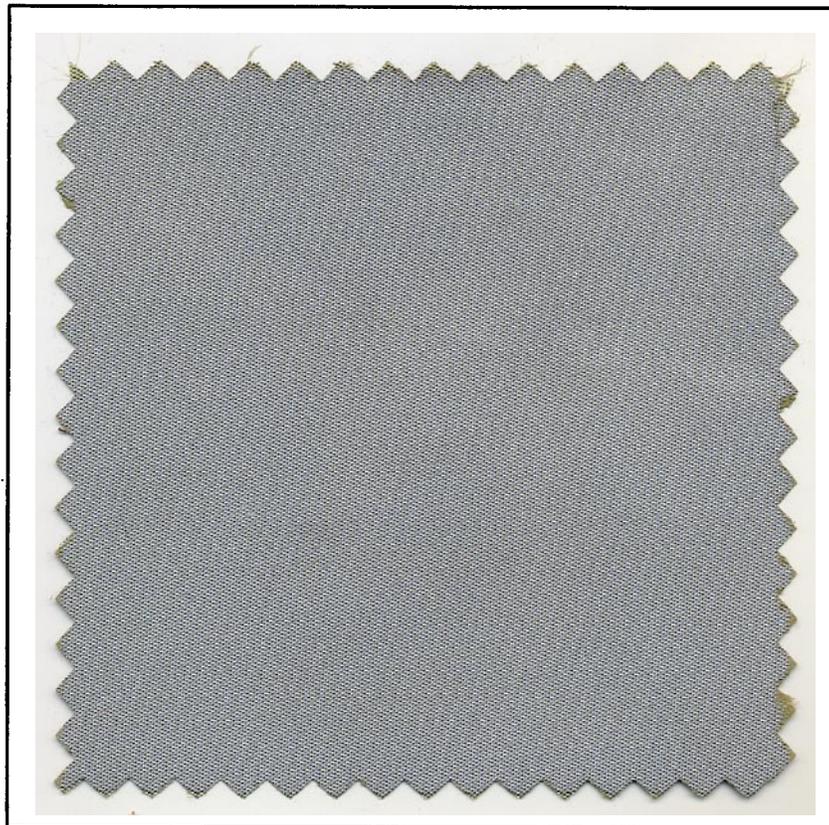
REFLECTIVE LINING FABRICS

Definition: Conventional suit and coat lining fabrics such as satin, taffeta, twill, and plain weave lining fabrics, are coated on one side with metallic or colored flakes in a resin binder.

- Advantages:**
- It is claimed that this type of lining is warmer in cold weather, cooler in the hot sun, comfortable to wear the year-round.
 - These linings have eye appeal ; sales appeal.
 - Reflective linings can give good serviceability in wear and cleaning if the aluminum coating is applied to a firmly woven lining fabric, and if the conditions of applying the aluminum particles are properly controlled.

- Disadvantages:** Wear and drycleaning may alter the appearance of the treated side of the lining fabric. (See page 405.)
- Cases are on record where some of the metallic particles have been removed in one drycleaning. More particles may be removed in successive

Milium ®



REFLECTIVE LINING FABRICS

drycleanings. This alters the appearance of the coated side of the fabric. This may or may not be objectionable, depending on the attitude of the wearer.

- If the metallic particles are removed from the lining fabric and transferred to a lighter coating fabric, a greying of the outer coating fabric may occur.

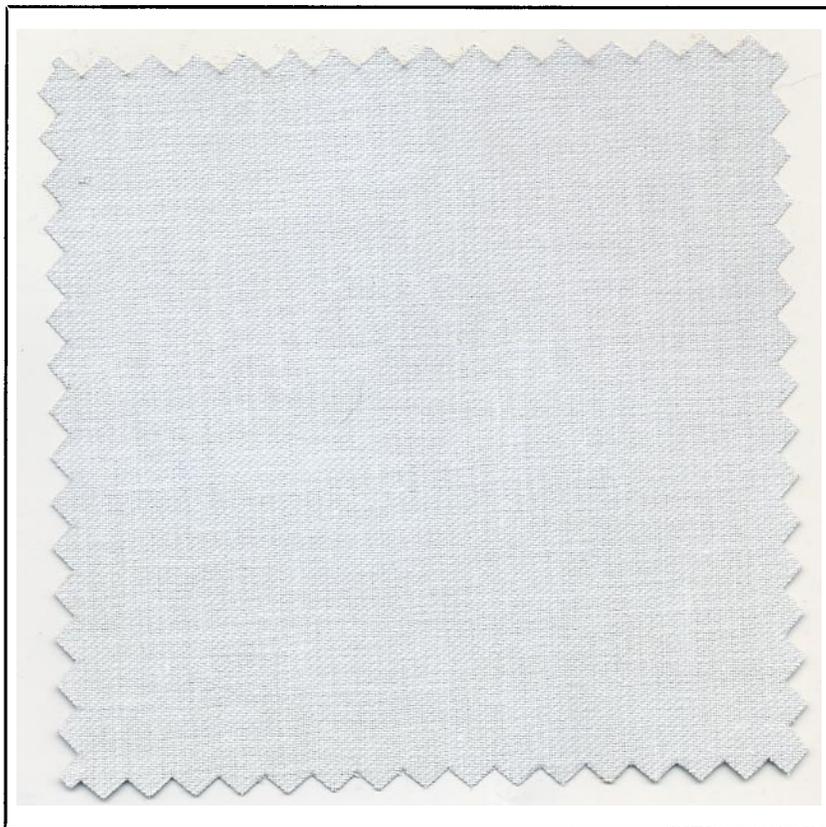
REFLECTIVE LINING FABRICS

TRADE-MARK NAMES

Lum-O-Line
Met-L-Chene
Milium
Temp-Resisto
Therm-O-Ray

MANUFACTURERS

Marlboro Fabrics, Inc.
Kenyon Piece Dyeworks, Inc.
Deering Milliken & Co., Inc.
Samuel Kaplan & Sons, Inc.
Herbert Mfg. Co.



Weatherall, Milium ® Coated

REFLECTIVE DRAPERY LINING FABRICS

Definition: Conventional cotton drapery linings such as sateen, brocades, print cloth (a plain weave cotton), are coated on one side with metallic or colored flakes in a resin binder. This type of fabric may be sold under various trade names.

Advantages:

- The shiny surface of the drapery fabric placed against the window reflects the rays of sunlight. This, it is reasoned, deflects the sun's rays and does not permit their penetration of the drapery fabric. This reduces the chance of fabric damage and color damage to the draperies and curtains, as well as other household fabrics in the room.

Disadvantages:

- Drycleaning may remove some of the metallic particles. The degree of removal is closely related to the background fabric. A lining fabric of a loosely constructed weave will flake off more particles than a lining fabric with a tightly woven weave. This flaking often alters the appearance of the reflective side of the lining fabric. (See page 405.)

REFLECTIVE DRAPERY LINING FABRICS

TRADE-MARK NAMES

Weatherwall (Silver)
Weatherwhite (White)
Temp-resist (Silver)
Supertemp (White)

MANUFACTURERS

Shulman Fabrics, Inc.
Shulman Fabrics, Inc.
S. Kaplan & Sons
S. Kaplan & Sons

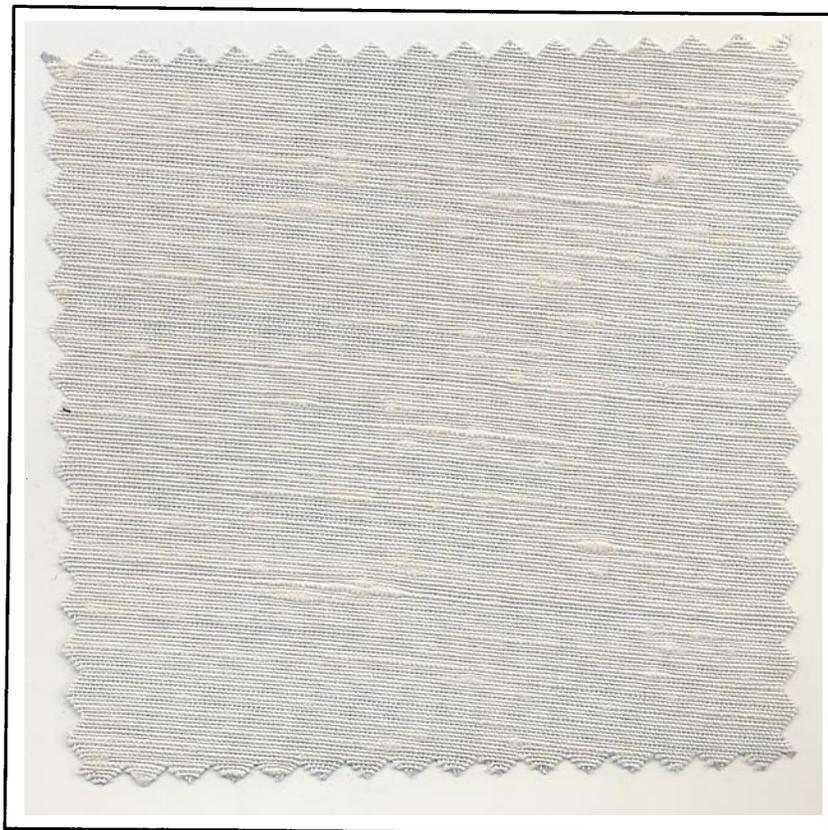
PLASTIC LAMINATED DRAPERY FABRIC

Definition: A conventional drapery fabric may be laminated with a vinyl film. (See underside of swatch.) The film is bonded to the fabric with an adhesive compound.

- Advantages:**
- A vinyl film applied directly to the surface of a drapery fabric eliminates the need for a separate lining. It is called a self-lined drapery fabric.
 - The film has a reflective property to sunlight, hence blocks off light.
 - The film has an insulation value. Because air cannot pass through the plastic layer of the fabric, it is said to be effective in maintaining room temperature.
 - The film serves to make the fabric 100% blackout. It also has acoustical values.
 - The film of the fabric should be wiped with a damp cloth; the fabric side vacuumed.

- Disadvantages:**
- Embedded soil may not be removed by the above care methods.
 - Wetcleaning may result in excessive shrinkage and separation of film from fabric.
 - Drycleaning results in excessive shrinkage. The fabric stiffens. There may be partial separation of the film from the fabric.
 - Exposure to excessive heat over a long period of time may cause yellowing of the vinyl film.

Antique Satin, Thermolon—A. W. Scheffres Corp.



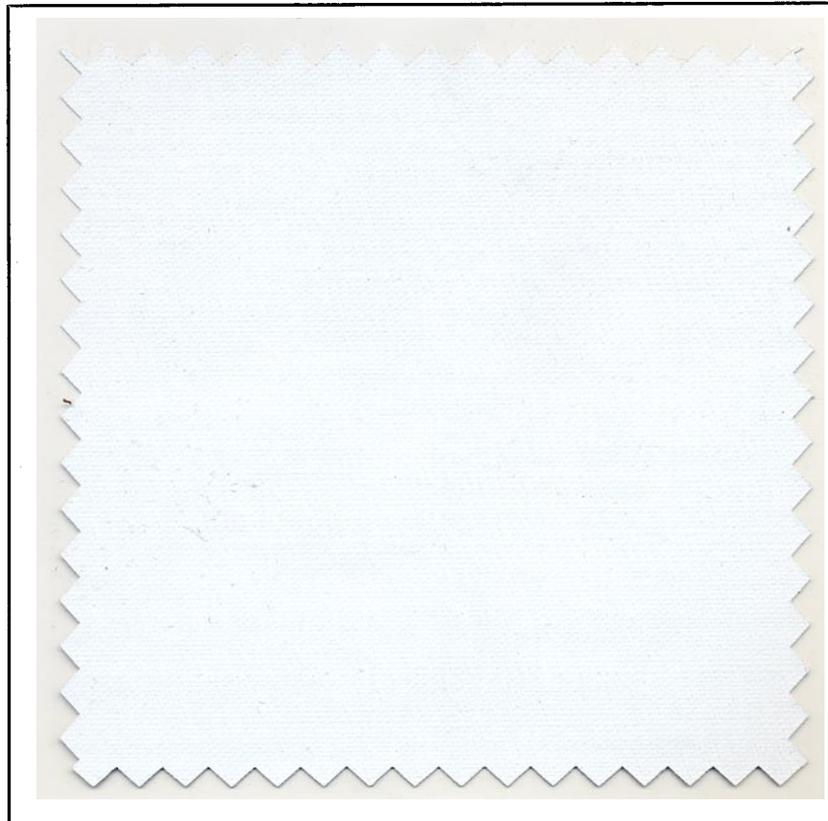
OPAQUE DRAPERY LINING FABRIC

Definition: Conventional drapery lining fabrics, such as sateen or print cloth (a plain weave cotton fabric), are coated on one side with a vinyl resin material to make the fabric opaque.

- Advantages:**
- This type of coated fabric comes in white, silver or black, allowing selection according to use.
 - The coating serves to shut out light and prevent it from entering the room. At the same time, the coating stops the light inside the room from from being seen on the outside.
 - Coated fabrics serve as a good black-out material in rooms used to project movies.
 - Coated fabrics serve a useful function as a black-out fabric in case of emergencies, such as war.

- Disadvantages:**
- Vinyl-coated drapery lining can be cleaned satisfactorily in petroleum solvent. Drycleaning in a synthetic solvent causes some of the coatings to separate from the lining fabric; still others may stiffen and crack. (See pages 402-403.) One manufacturer has improved his product so that it can be cleaned satisfactorily in both petroleum and synthetic solvent.

*Opaqueen II. Drycleanable in both petroleum and synthetic solvent—
Berkshire Hathaway, Inc.*



OPAQUE DRAPERY LINING FABRIC

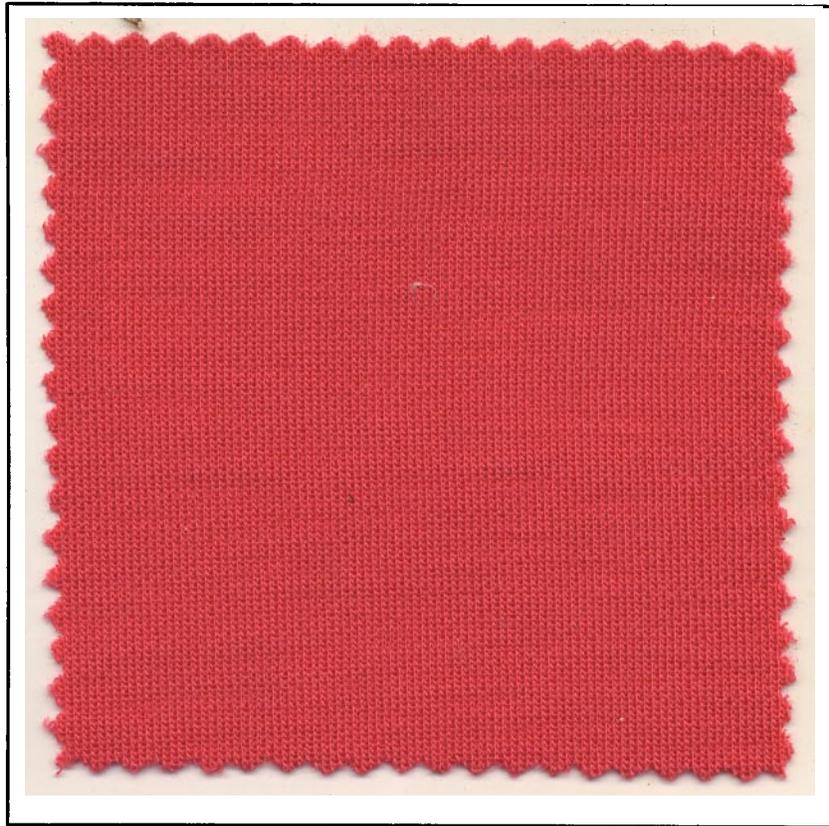
B.

KNITTED FABRICS

A variety of effects may be achieved in knitted fabrics by varying the fiber content and using novelty type yarns. An extra yarn or fibers may be knitted into the background fabric. Finishing techniques and printing may also be used to create interesting effects that change the appearance so that many times a knitted fabric looks like a conventional woven fabric. In this discussion, we have classified knitted fabrics as follows:

1. Plain jersey knits.
2. Double knits.
3. Brushed knits.
4. Suede-finished knits.
5. Ribbon knits.

Knitted coating fabrics that resemble woven fabrics, and fur-type pile fabrics, are discussed in a later section.



JERSEY KNIT

JERSEY KNIT

Definition: A jersey knit fabric is made of a continuous yarn or set of yarns used to form loops. It is made of rows of loops, each row caught in the previous row. Jersey knit fabrics may be made from cotton, wool, rayon, acetate, Arnel, nylon, Orlon, Dynel, Acrilan, and the precious hair fibers, angora and cashmere.

- Advantages:**
- Knit fabrics are very comfortable to wear because they are elastic and porous.
 - Cashmere and angora knits are luxurious in appearance.
 - Knit fabrics are offered in a wide variety of constructions and colors.
 - Knit fabrics do not wrinkle easily. They pack and travel well.
 - The majority of knit fabrics are easy to care for. They dryclean satisfactorily, depending on color, controlled dimensional stability, and cut of the garment.
 - Some knit fabrics block and shape easily; others with some difficulty, depending on fiber content and fabric construction.

- Disadvantages:**
- Some knit fabrics lack stability. They shrink, stretch, sag readily. This may be controlled by: (1) proper blending of fibers in yarn construction; (2) making a closely knit, rather than loosely knit fabric; (3) the application of a finish to control stability.
 - Many knit fabrics have thick and thin places that are susceptible to breaking into a hole. It is difficult to mend knit fabrics without the mend being obvious.
 - Some knit fabrics made of synthetic fibers stretch with steaming and blocking and do not recover or respond to shaping. (See Page 544).
 - Sharp objects such as pins, staples, can cause fabric damage readily in a knit fabric.
 - Knit garments are difficult to alter in some cases, as the line of stitching frequently leaves small needle holes in the fabric.
 - It is very easy to cut a knit garment off grain in garment construction. This can result in an unsatisfactory appearance after wear and dry-cleaning.

DOUBLE KNITS

Definition: There are two basic types of knitting machines: the flat-needle bar-type and the circular type. Fabrics made on these machines are classed as warp knit and weft knit cloths. In each type three basic stitches are used: (1) Plain, (2) Purl, (3) Rib. Variation is achieved by combining the three basic stitches or by dropping them. Double-knits may be made on either machine by accumulating two or three yarns on one needle or using extra yarns to produce a thicker fabric.

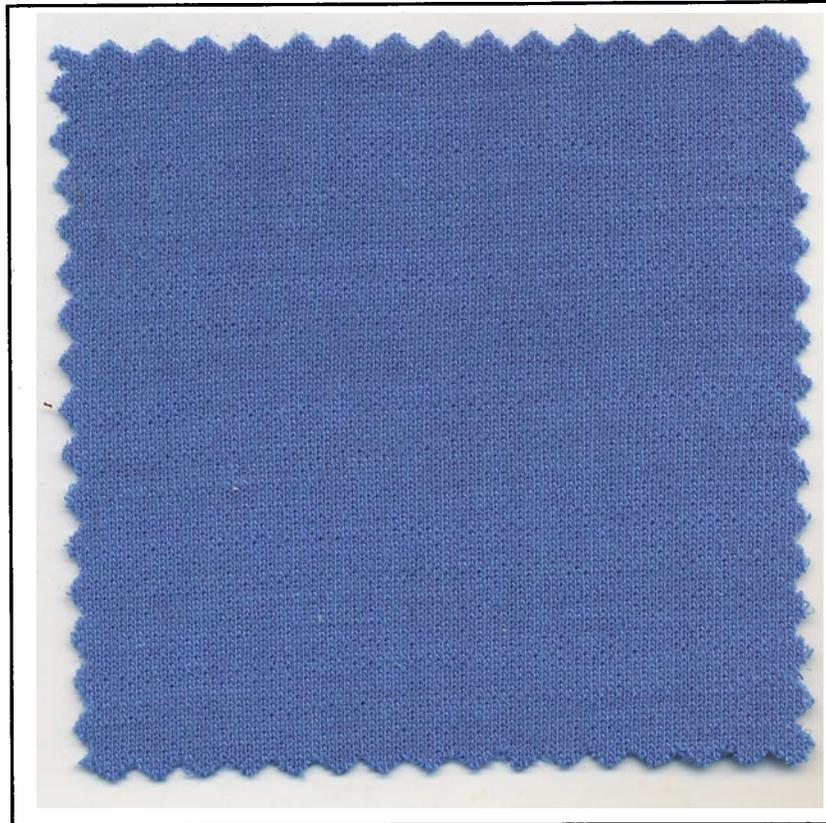
Double-knits, because of their double construction, can be classed as a two-faced fabric. The two-sided utility of the fabric offers the garment designer exciting possibilities for creating new color harmonies.

Double-knit originated in Milan and Florence. The French, Swiss, Dutch and Belgians have been making fine but expensive double-knits for the last fifteen years. The knits were confined to the couturier trade. It was the Italian makers who brought double-knits into the volume class. Because double-knits were so popular, many American manufacturers began importing machinery and materials to produce double-knits in this country.

Advantages:

- Double knits may be made of cotton, wool or any of the synthetic fibers.
- They have a good appearance, hand and feel. They are comfortable to wear.

Double-knit, 100% Acrilan. Stevcoknit—Chemstrand Company



- Double-knits can be stabilized for shrinkage control by either physical or chemical means.
- A well balanced double-knit construction that is stabilized for shrinkage control drycleans satisfactorily.

Disadvantages:

- Care must be taken in pressing or finishing double-knit fabric made of the heat sensitive fibers to avoid glazing and shining the fabric, particularly on any dress detail where there is a double thickness of fabric.
- A double-knit fabric that is improperly constructed and finished may sag or stretch with wear.
- If the resin used for stabilization is removed in drycleaning solvent, shrinkage may occur.



Brushed Knit Fabric, rayon face, nylon back—Beaunit Corp.

BRUSHED KNITS

Definition: Knit fabrics can be given a finishing treatment that raises the fibers to the surface of the fabric. In brushed knits, the background loops cannot be seen on the face of the fabric.

Advantages:

- The fibers and yarns used to knit the fabric, the thickness of the fabric, the degree of napping and brushing, determine the texture and appearance of the fabric. Many interesting surface effects can be achieved.
- The majority of these fabrics dryclean well; many of them require special handling.

Disadvantages:

- Some brushed knits are very susceptible to abrasion (rubbing) in wear and in drycleaning.
- Long fibers in brushed knits have a tendency to “pill” or “ball up” in wear and in drycleaning. The nap may be removed, leaving a bare spot.
- Some short fibers in brushed knits have a tendency to shed.

Legislation: Brushed knit fabrics must meet the requirements of the Flammable Fabrics Act of 1954.

SUEDE-TYPE KNITS

Definition: Knit fabrics are given a mechanical finishing treatment that raises short fibers to the surface of the fabric. The fibers are sheared and pressed into the fabric. This gives it the appearance of suede leather. The loops of the background knit cannot be seen on the surface of the fabric. Suede-type knits may be made of rayon, wool, cotton, and synthetic fibers.

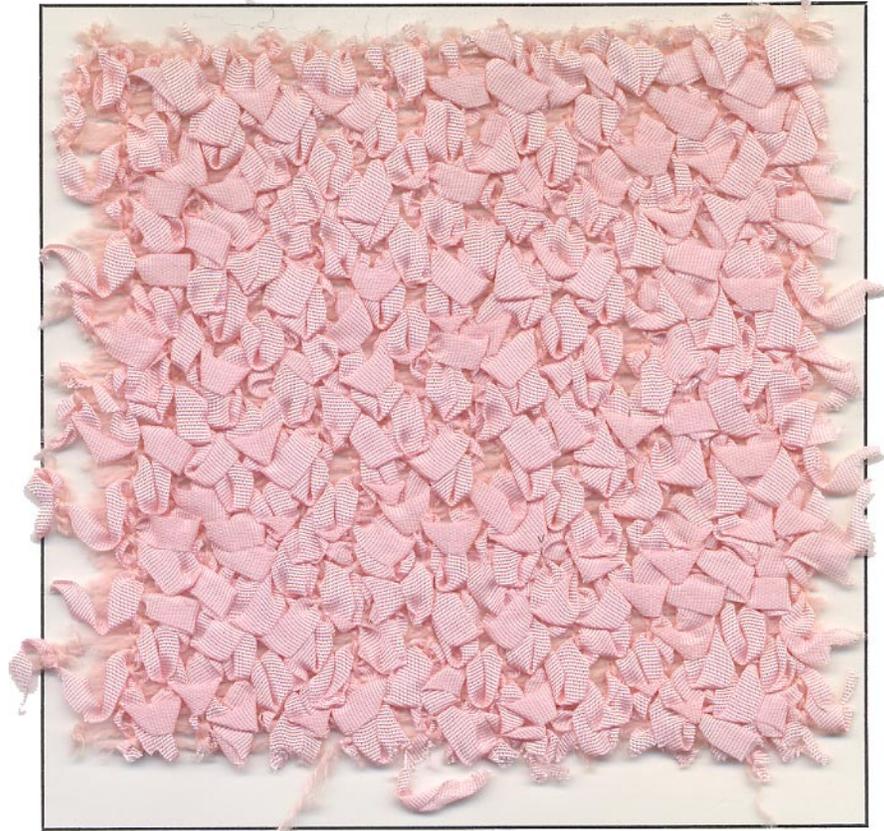
- Advantages:**
- This fabric construction produces a light-weight, durable fabric that can be used for rainwear, sportswear, light-weight coats, dresses, and lounging garments.
 - If shrinkage is controlled, suede-type knits are very serviceable.
 - Suede-type knits dryclean satisfactorily.

- Disadvantages:**
- Suede-type knits are susceptible to abrasion (rubbing) in wear. The nap may be removed, leaving a bare spot.
 - Some of these fabrics are not treated to be dimensionably stable. Allowances should be made for shrinkage.

*Vocama Nylon Tricot Knit, Arnel face—
Celanese Corporation of America, William Winkler, Inc.*



SUEDE-TYPE KNITS



Machine-made Ribbon Knit

RIBBON KNITS

Definition: A ribbon knit may be hand or machine made. A narrow acetate or rayon ribbon is used instead of a spun yarn to make the fabric. In machine knits, the background knit may be made of cotton, the surface of ribbon.

Advantages:

- Beautiful textured and unusual effects can be made using ribbon instead of yarn in a knit fabric.
- Ribbon knits are cool, comfortable to wear.
- Ribbon knits do not wrinkle readily. They pack and wear well.
- Most ribbon knit fabrics dryclean satisfactorily.

Disadvantages:

- Hand ribbon knits distort readily. This is due to the difference in tension in hand knitting, and to the fact that ribbon does not possess the elasticity necessary for blocking and shaping. (See page 544.)
- The stability of a machine ribbon knit depends on the stability of the cotton knit background. If the background is not stabilized, shrinkage may occur.
- Knit fabrics that are built onto a woven fabric in garment construction give better serviceability in wear and drycleaning.

C.
**FUR-TYPE PILE FABRICS
AND
SIMULATED FUR FABRICS**

DEEP PILE FUR FABRICS



*Registered Glenara, 100% Modacrylic pile, 50% Modacrylic, 50% cotton back—
Glenoit Mills, Inc.*

DEEP PILE FUR FABRICS

In 1958 when the first edition of this book was written, deep pile fur-type fabrics were in their infancy. In five years this segment of the textile industry has grown into a multi-billion dollar industry.

Man-made furs came into the consumer market in 1929. The fabrics were woven plush cloth simulating the look of genuine animal pelts like Persian Lamb, Broadtail, Seal and Leopard. They were made of mohair, alpaca or wool, often blended with rayon for luster. (See pages 233 and 235.)

Between 1935-1938 woven high pile fabrics of alpaca were developed and used as shells and liners. This was a major technical advance that resulted in fabrics with denser pile, a more furry hand, better abrasion resistance and new color interest.

1944 brought the first knitted high or deep pile fabrics made on the sliver knit machine. Production speed was increased; costs were decreased. The new method of production made it possible to pack more pile staple per unit area to create greater density and furriness of pile. Fabrics closely duplicated the genuine animal pelt.

1955 brought new developments in knitted fabrics made of Orlon and Dynel. They looked like genuine fur. Then the differential pile heights that created the "guard hair" look of genuine fur were born. This effect is achieved by using two different fibers which have differential shrink-

ages. The different pile heights are created by the finishing process which shrinks one fiber to a lower pile height than the other.

In 1959 printed versions of animal furs on pile fabrics found public acceptance and rapidly gave them an identity of their own.

Today man-made furs stand on their own merit. The variety offered today's consumer can be seen by studying the table on man-made furs.

There is continuous experimentation with new fibers and new finishes. Research is being conducted in the field of finishing processes to improve resiliency and durability after drycleaning. Research is also directed toward the use and adaptation of jacquard equipment to the sliver knitting machine. This would make possible the development of intricate patterns and sculptured effects through the use of different fibers with differential shrinkage. The whole area of color and design remains to be explored. To date, most designs have concentrated on duplicating the look of genuine pelts. The challenge is to break away from pelt designs and enter the area of original designs and colors.

Advantages:

- The fur-type pile fabrics have a luxurious appearance and feel.
- They are intrinsically good. They stand on their own merit.
- These fabrics are comparatively light in weight, yet warm to wear.
- Many fur-type fabrics wear very well.
- The relative cost of fur-type pile fabrics is less than genuine fur.
- Moths do not attack a clean fabric.
- These fabrics dryclean satisfactorily but they require special care.
- Some manufacturers recommend the furrier method of cleaning.

Disadvantages:

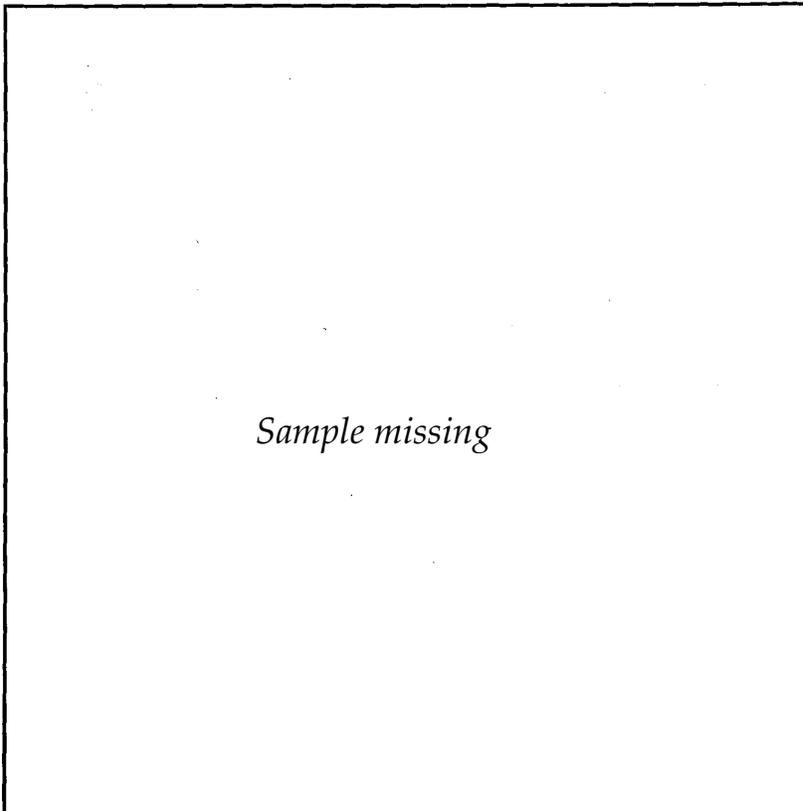
- Some of these fabrics have a natural tendency to tuft in wear and in drycleaning. (Tufting means the bunching together of fibers.) The degree of tufting depends on the fiber content, fabric construction, finish, amount of wear, method of cleaning. (See pages 474-475.)
- Some of these fabrics have natural tendency to mat and flatten down. The degree of matting depends on the fiber content, fabric construction, amount of wear, and method of cleaning.
- Some of these fabrics shed fibers, some give off lint which adheres to the woven fabrics with which they are combined in garment design.
- Fabrics made of heat-sensitive fibers may be damaged by excessive heat such as a cigarette burn, or contact with a hot radiator.

**FUR-TYPE PILE FABRIC—
KNIT BACK**



*100% Orlon Face; 100% Dynel back.
Borg Fabric Division, Amphenol—Borg Electronic Corp.*

Brazotta, 75% Dynel, 25% Mohair Cotton Back—Collins & Aikman



**FUR-TYPE PILE FABRICS—
WOVEN BACK**

DEEP PILE COATING FABRICS

TRADE-MARK NAMES—GENERIC NAMES

Mill	Trade-Mark Name	Pile	Back	Pile/Back	
Alamac	Lurathal Thaline	65% / 35% Acrylic/Modacrylic	.....	75% / 25%
		100% Modacrylic	50% Dynel, 50% Cotton	72% / 28%	
Blumenthal	Sutton Place	25% / 75% Mohair/Dynel	100% Cotton	70% / 30%	
	Kilimanjaro	25% / 75% Mohair/Dynel	100% Cotton	70% / 30%	
	Jagana	25% / 75% Mohair/Dynel	100% Cotton	70% / 30%	
	Sans Prix	25% / 75% Mohair/Dynel	100% Cotton	70% / 30%	
	Kabhora	25% / 75% Mohair/Dynel	100% Cotton	70% / 30%	
	Kurdistan	25% / 75% Mohair/Dynel	100% Cotton	62% / 38%	
	Shandra	60% / 40% Creslan/Dynel	100% Cotton	58% / 42%	
Borg	Borgana Borg-otta	90% / 10% Orlon/Darvan	100% Dynel	68% / 32%	
		100% Modacrylic	50% Modacrylic, 50% triacetate	73% / 27%	
	Borgalaska	80% / 20% Orlon/Verel	100% Dynel	68% / 32%	
Collins & Ailman	Brazotta	75% / 25% Modacrylic/Mohair	100% Cotton	74% / 26%	
	Chita	75% / 25% Modacrylic/Mohair	100% Cotton	74% / 26%	
	Somali	75% / 25% Modacrylic/Mohair	100% Cotton	74% / 26%	
Glenoit	Super Glenara Regina Glenara	75% / 25% Acrylic/modacrylic (Dynel)	100% Cotton	65% / 35%	
		100% modacrylic (50% Dynel/50% Verel)	60% Modacrylic, 40% Cotton	70% / 30%	
	Glenshaggy	50% / 50% acrylic (Acrilan)/modacrylic (Verel)	100% Olefin	75% / 25%	
	Glenfluffy	100% Acrylic	100% Olefin	75% / 25%	
	Glensea	100% acrylic (Orlon)	100% Olefin	60% / 40%	
	Acriliner	100% acrylic (Acrilan)	100% Olefin	65% / 35%	
	Glenfrost	65% / 35% acrylic (Acrilan)/modacrylic (Verel)	100% Cotton	65% / 35%	
	Glenarctic	65% / 35% acrylic (Acrilan)/modacrylic (Verel)	100% Olefin	70% / 30%	
	Glentier	100% Modacrylic	100% Nylon	65% / 35%	
	Glentalia	100% Acrylic	100% Cotton	75% / 25%	
La France	Arosa (White & Natural)	75% / 25% Modacrylic/Mohair	100% Cotton	72% / 28%	
	Arosa (Colors)	65% / 35% Modacrylic/Mohair	100% Cotton	72% / 28%	
	Kenya	75% / 25% Modacrylic/Mohair	100% Cotton	72% / 28%	
	Jaguar	75% / 25% Modacrylic/Mohair	100% Cotton	72% / 28%	
	Amazona	75% / 25% Modacrylic/Mohair	100% Cotton	72% / 28%	
	Athene	75% / 25% Modacrylic/Mohair	100% Cotton	72% / 28%	
	Hair Seal	65% / 35% Modacrylic/Mohair	100% Cotton	72% / 28%	
	Lakoda	65% / 35% Modacrylic/Mohair	100% Cotton	58% / 42%	
	Sierra	100% Modacrylic	100% Cotton	62% / 38%	
	Malden	<i>Liners</i>			
Biarritz		100% Acrylic	.....	.....
Capri		100% Acrylic	.....	.....
Lido		100% Orlon	.....	.....
Riviera		100% Orlon	.....	.....
Siboney		100% Orlon	.....	.....
<i>Outerwear</i>					
Gracie-Park		100% Modacrylic (Dynel-Verel)	.....	.....
Elegante		100% Modacrylic (Dynel-Verel)	.....	.....
Belfiore		60% / 40% Acrylic/Modacrylic	.....	.....
Belfiore-Frost		60% / 40% Acrylic/Modacrylic	.....	.....
Timme		Timotta & Congo Print	75% / 25% Dynel Modacrylic/Mohair	100% Cotton	69% / 31%
		Futura	50% / 50% Orlon Acrylic/Nylon	100% Cotton	39% / 61%
	Rocket & Planet	100% Creslan Acrylic	100% Cotton	61% / 39%	

SIMULATED FUR FABRICS—KNIT BACK

Definition: There are many different types of fabrics that fall within this classification. Typical examples are:

- *Knit Krimmer*: cotton knit back; loops on surface may be of wool, wool and rayon, wool and acetate.
- *Knit-fur prints*: This is a brushed rayon knit printed to simulate genuine fur, such as leopard, zebra, etc.
- *Knit Pony and Mock Mole*: These are made of a brushed rayon knit with a long nap. The fabric is then given a mechanical treatment that results in the characteristic markings of natural pony or mole furs.

Advantages:

- These fabrics look like genuine fur and are available at less cost than genuine fur.
- Most simulated fur fabrics with a knit back dryclean satisfactorily.

Disadvantages:

- The nap that is given a mechanical treatment to create a design may be affected in wear and drycleaning. The design becomes less intense in wear and successive drycleanings.
- Excessive shrinkage may occur in drycleaning if the knit background has not been stabilized for shrinkage control.

Leopard Print—100% Acrylic face; 100% Cotton back—Collins and Aikman



SIMULATED FUR FABRICS—KNIT BACK



Rayon Pile, Cotton back

SIMULATED FUR FABRICS—WOVEN BACK

Definition: There are many different fabrics that fall within this classification. They may be classed as follows:

1. Cotton Velour—printed to resemble zebra, leopard, tiger, and python.
2. Caracul—characterized by lofty loops or curls of thick lustrous yarns on the surface of the fabric. The loops may be of mohair, lustrous wool or worsted, while the background may be of wool or cotton.
3. Persian Paw—cotton back, wool pile. The pile is thick, deep, lustrous, and curled and pressed into a design that resembles genuine paw fur.
4. Broadtail—usually cotton back, wool pile. The pile is short, smooth, glossy, sleek, and flat. The fabric is given a mechanical finish, simulating genuine broadtail.

- Advantages:**
- These fur-type fabrics have a luxurious appearance and feel.
 - They may be used in place of genuine fur and at a much lower cost.
 - Most of these simulated fur-type fabrics with a woven back dryclean satisfactorily.

- Disadvantages:**
- It has been observed that some of the dyes used to print the cotton velour simulated fur fabrics are reduced in value and intensity in dry-cleaning. This may or may not be objectionable, depending on the individual.
 - Fur-type effects created by the application of heat, moisture, and pressure may be altered in wear and drycleaning. The degree to which this occurs depends on the fiber content, fabric construction, and conditions of application of the finish.

SIMULATED PERSIAN LAMB

Definition: There are two methods of making simulated Persian Lamb. They are:

1. The center or core of the curl is made of a two-ply cotton yarn. These yarns are twisted to hold synthetic fibers that are curled very tightly around the center. These curls are held to a plain weave cotton fabric with adhesive.
2. The curled yarns are made as described above, but they are stitched to the plain weave background fabric by means of a Schiffli embroidery machine.
3. A deep pile fabric is knitted by the sliver method. The pile is finished to resemble the curled surface of genuine Persian Lamb.

Advantages:

- The simulated Persian Lamb fabrics look like genuine fur.
- Although relatively expensive, it is less expensive than genuine Persian Lamb.
- The Persian Lamb fabric made with the Schiffli embroidery machine drycleans satisfactorily.

Disadvantages:

- The glued Persian Lamb fabric cannot be drycleaned. The adhesive used to hold the curl to the background fabric is solvent-soluble.

Exitor, Acetate curl, cotton back



SIMULATED PERSIAN LAMB

D.
DRESS FABRICS
SUITING FABRICS
COATING FABRICS

BROCADE



Brocade, 68% Acetate; 16% Polyester; 16% Metal.

BROCADE

Definition: Brocade is derived from a Spanish word, "to figure." Brocade is a rich-appearing fabric made with a jacquard weave. It may be recognized by its prominent and raised design. It is not reversible as is damask (see page 239). It may be made of the natural or synthetic fibers. In some fabrics a gold or silver yarn may be introduced to form the figure or design.

Advantages:

- Many luxurious and beautiful fabrics made of brocade offer a wide selection for both wearing apparel and household fabrics.
- The majority of brocades give good serviceability.
- Brocade fabrics dryclean satisfactorily.

Disadvantages:

- Serviceability is related to construction of the design. Designs with long floating yarns thrown to the surface may snag, rough up, and break with abrasion or rubbing in wear and drycleaning.
- Shrinkage has been a problem in some of the rayon and cotton, rayon and acetate brocades.

DAMASK

Definition: Damask may be made of cotton, linen, silk, wool, rayon, or any of the newer synthetic fibers. It is made with a Jacquard woven pattern. The design is flat, differing from a brocade (see page 237). The background is always a satin weave. The design looks the same on the reverse side as it does on the right side, but in reverse. There are three types of damask fabrics: (1) The light-weight type used for table linens; (2) the medium-weight type used for wearing apparel; and (3) the heavy-weight type used for drapery and upholstery fabrics.

Advantages:

- Many beautiful, luxurious damask fabrics are available, offering a wide selection.
- The majority of damask fabrics are very serviceable.
- Damask fabrics dryclean satisfactorily.

Disadvantages:

- In the large patterned damasks, the long satin floats of the background may snag, rough up, and break readily.
- It is advisable to allow for shrinkage, since some damask fabrics do shrink in drycleaning and wetcleaning.

100% Silk Damask



DAMASK

FOULARD

Definition: Foulard is a light-weight silk, rayon, cotton, or wool fabric characterized by its twill weave. It has a high luster on the right side; dull on the under or reverse side. It is usually printed, designs ranging from simple polka-dots to elaborate designs. It is also made in plain or solid colors. It has a characteristic feel that may be described as light, firm, supple.

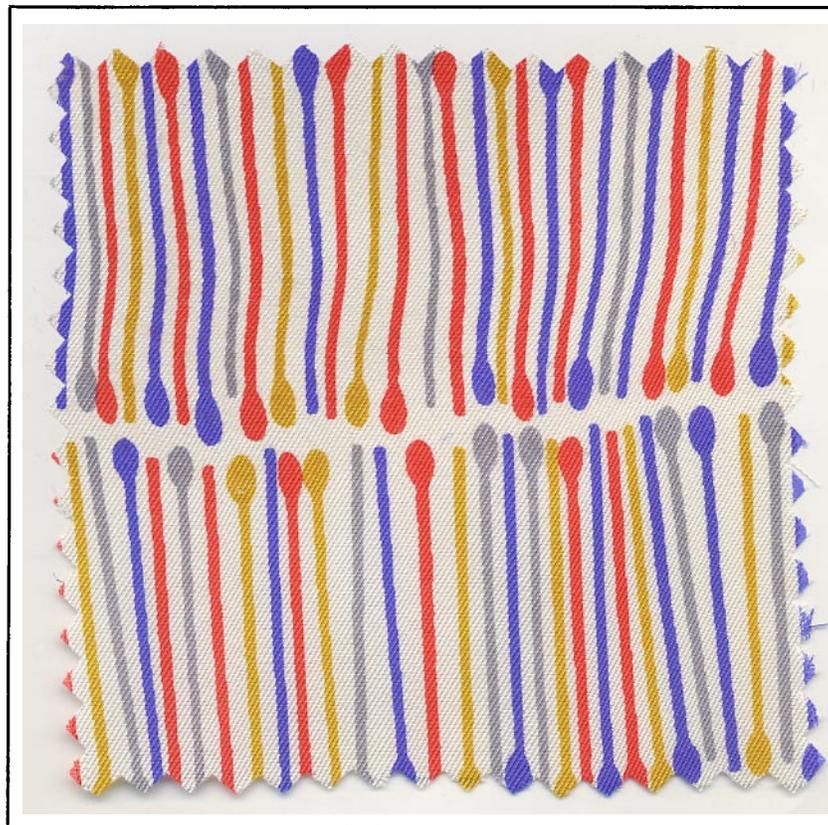
Advantages:

- It is a light-weight-serviceable fabric.
- Designs and colors offer a wide selection of fabrics.
- Foulard drycleans satisfactorily.

Disadvantages:

- Some of the dyes used to color and print foulard fabrics have poor colorfastness. This presents a problem in the removal of spots and stains.

100% Silk



FOULARD

LAMÉ

Definition: Lamé is derived from the French word “laminer”, “to flatten.” A true Lamé is a silk brocade made with a fine metallic yarn to create a decorative design. Today the term is used generally to describe a variety of fabrics made with metallic yarns. (See Metallic Yarns, pages 85, 86, 87.)

Advantages:

- Lamé is luxurious in appearance.
- It is soft, drapable and can be used effectively to create distinctive formal and semi-formal dresses.
- American-made metallic yarns do not tarnish or discolor from perspiration.

Disadvantages:

- Lamé fabrics require special handling in drycleaning and finishing.
- Some imported fabrics contain metallic yarns that tarnish from gases in the air. They discolor from perspiration.
- Hard-set wear wrinkles are difficult to remove.
- Spots and stains are difficult to remove. Some metallic yarns are affected adversely by spotting reagents.

Silk and Metal Lamé



LAMÉ



MATELASSÉ

Definition: Matelassé is derived from a French term “matelas” meaning mattress pad. A true matelassé is an adaptation of a double cloth construction, made of either natural or synthetic yarns. It may be described as two distinct fabrics united in weaving to produce the surface quilted effect when the fabric is relaxed after weaving. Other methods are used to make fabrics that are sometimes called “matelassé.” For example, a fabric may be made by interlacing of crepe yarns with a straight yarn in both the warp and filling directions, or in some cases only the filling direction. Some fabrics called “matelassé” may be woven with small dobby designs on a box loom. Still other fabrics may be embossed to look like a true matelassé.

Advantages:

- This type of fabric construction offers a variety of interesting textured surfaces.
- Matelassé, with reasonable care in wear, is a very serviceable fabric.
- Matelassé drycleans satisfactorily. It requires special care in finishing.

Disadvantages:

- Some matelassé fabrics have a tendency to shrink or stretch, depending on the method of construction.
- Matelassé fabrics cannot be wetcleaned because of the risk of excessive shrinkage.

- Some of the dyes used to dye matelassé fabrics bleed in drycleaning solvents.
- Matelassé fabrics are best finished with steam and air finishing equipment in a drycleaning plant, as home pressing tends to flatten the textured surface of the fabric.
- The serviceability of embossed matelassé fabrics is related to the fiber content and finish of the fabric. Fabrics made of non-heat sensitive fibers cannot be embossed to give permanency of design unless given a special finish.

PEAU de SOIE—PEAU D'ANGE

Definition: “Peau de Soie” is a French term meaning “silk skin.” Originally it was a silk fabric made with an eight-shaft satin weave. It looks the same on both sides, thus differing from most other satin fabrics. It has a very smooth, silky, semi-dull appearance. It is much heavier than most satin constructions. Today this fabric may be made of silk and acetate, Orlon and silk, or 100% acetate. Peau D’Ange is similar but different from Peau de Soie. Peau D’Ange has a dull satin face and back. It feels like “Angel Skin” which the name implies.

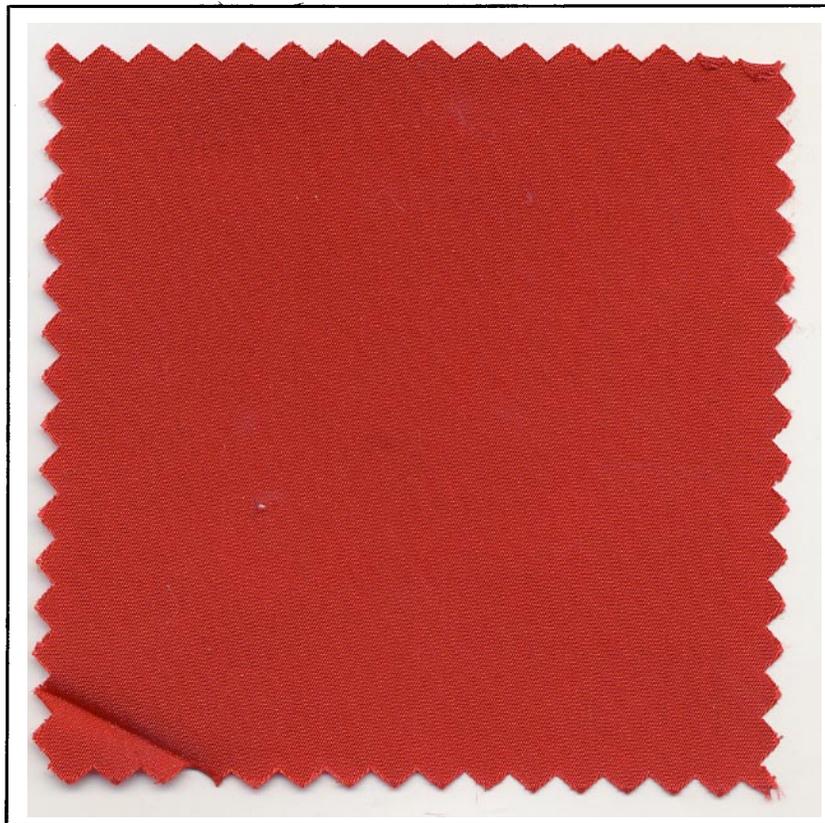
Advantages:

- This is a most luxurious fabric for late afternoon and evening wearing apparel.
- It is a luxury fabric and requires special care in wear.
- Most of these fabrics dryclean satisfactorily.

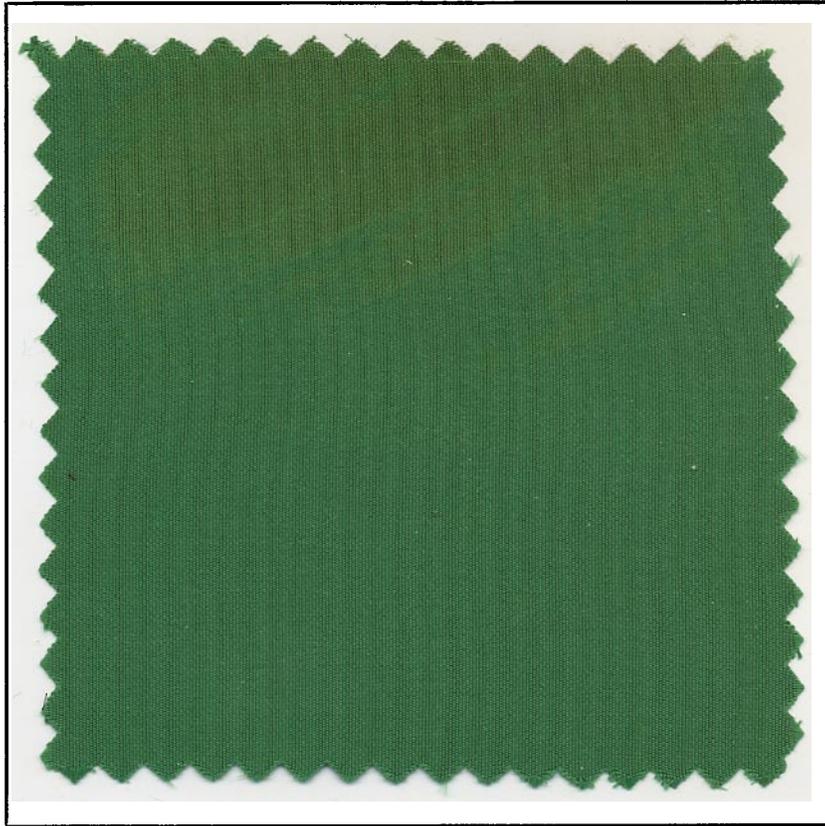
Disadvantages:

- Peau de Soie is a loom-finished fabric. For this reason it may lose some of its original stiffness in drycleaning.
- It is difficult to remove spots and stains from this fabric.
- Satisfaction frequently depends on garment construction. (See page 542.)

100% Silk



PEAU de SOIE—PEAU D'ANGE



100% Silk

POULT DE SOIE

Definition: “Poult de Soie” is a fine silk grosgrain fabric having the rustle of a taffeta. The yarns are so woven that the surface of the fabric has a grainy appearance, yet close observation discloses a fine rib running in the filling or crosswise direction. It is stiffer than Peau de Soie. (See page 247.)

- Advantages:**
- This is a fabric appropriate for formal afternoon and evening dresses.
 - It is a luxury fabric that requires special care in wear.
 - Most of these fabrics dryclean satisfactorily.

- Disadvantages:**
- Poult de Soie is a loom-finished fabric. For this reason, it may lose some of its original stiffness in drycleaning.
 - Satisfaction frequently depends on garment construction. (See page 542.)

SILK AND WOOL COMBINATIONS

Definition: There are many men's and women's dress and suiting fabrics made of silk and wool, both imported and American-made. The majority of these fabrics are made with a silk yarn in the warp or lengthwise direction of the fabric (approximately 15% by weight), and a yarn-dyed wool yarn in the filling or crosswise direction. The fine silk yarns are invisible. There are variations in color, weave, and proportion of silk to wool yarns in this class of fabrics.

Advantages:

- A variety of beautiful and luxurious dress and suiting fabrics are made by combining silk and wool.
- These fabrics are light in weight, comfortable to wear.
- These fabrics resist wrinkling; they pack and travel well.
- The majority of the silk and wool combinations require special handling in drycleaning.

Disadvantages:

- In some of these fabrics, the silk yarns break at a point of strain because of their low strength.
- In some, the fine silk or wool fibers work to the surface where the fabric is folded and where it is subjected to abrasion or rubbing.

Alaskine, 34% Silk; 66% Wool.



- In some fabrics, the wool fibers work to the surface and form little “pills” or “balls” of fibers.
- Some of these fabrics show yarn and seam slippage in wear and cleaning.



SURAH (Sometimes called "Silk Serge")

Definition: Surah is a semi-dull, soft, light-weight fabric. It may be made of silk or rayon. It may be identified by the fancy twill weave. It has very definite diagonal lines. It may be yarn-dyed to create plaids and checks or solid colors. Surah may also be printed. The fabric is loom-finished.

- Advantages:**
- Surah fabrics may be selected for a variety of uses, including wearing apparel and household items.
 - There is a wide selection in price, ranging from inexpensive rayon surah to very expensive silk surah.
 - The majority of surah fabrics dryclean satisfactorily.

- Disadvantages:**
- Some surah fabrics are sized very heavily. This sizing may be partially lost in drycleaning, causing the fabric to become limp. Perspiration, spilling of water or a beverage may also leave the fabric limp in the area exposed to moisture. When the sizing is lost, surah is very susceptible to yarn and seam slippage.
 - Some of the dyes used to give this fabric its color or design bleed readily.
 - Some surah fabrics are susceptible to excessive shrinkage.

BROADCLOTH

Definition Broadcloth is a term used to describe several dissimilar fabrics, made with different fibers, weaves, and finishes. We may define them as follows:

- (1) *Broadcloth made from wool or wool mixed with synthetic fibers:* These are fine, open, twill weave fabrics that are “fulled,” napped, sheared, dampened, and the nap permanently laid down in one direction. The weave cannot be seen on the right side of the fabric. This gives the fabric its characteristic smooth, lustrous, fine velvet-like texture. “Chiffon” broadcloth is a light-weight dress fabric with a high luster. Coating and suiting broadcloths are heavier.
- (2) *Broadcloth made from spun synthetic yarns:* These fabrics are usually made by a warp rib weave. The rib is formed by weaving a number of filling yarns as one to form the ribs. It has the finest rib of all ribbed weave fabrics.
- (3) *Broadcloth made from silk or filament type synthetic yarns.* These fabrics are woven in a plain weave with a fine crosswise rib obtained by using a heavier filling than warp yarn.
- (4) *Broadcloth made from cotton yarns.* These fabrics are made the same way as the broadcloths described under (2), above.

100% Wool



BROADCLOTH

Advantages: (1) *Wool Broadcloth:*

- It is a soft, pliable, drapable, dressy fabric.
- It gives warmth without weight.
- It wears well with proper care.
- It requires special care in drycleaning.

(2) *Broadcloth made from silk or synthetic fibers:*

- It is a soft, pliable, drapable fabric.
- It is cool and comfortable to wear.
- It wears and drycleans well with care.

(3) *Cotton Broadcloth:*

- It is very serviceable and durable.
- It can be drycleaned or wetcleaned.

Disadvantages: (1) *Wool Broadcloth:*

- Wool broadcloth is relatively expensive.
- Inexpensive grades of wool broadcloth lack serviceability.
- Wool broadcloth catches lint easily.
- Wool broadcloth is very susceptible to abrasion or rubbing.

(2) *Broadcloth made from spun synthetic fibers:*

- Spun type broadcloths hold soil and stains quite tenaciously, making it difficult to remove spots and stains.