

SECTION III

DEFINITION OF TERMS

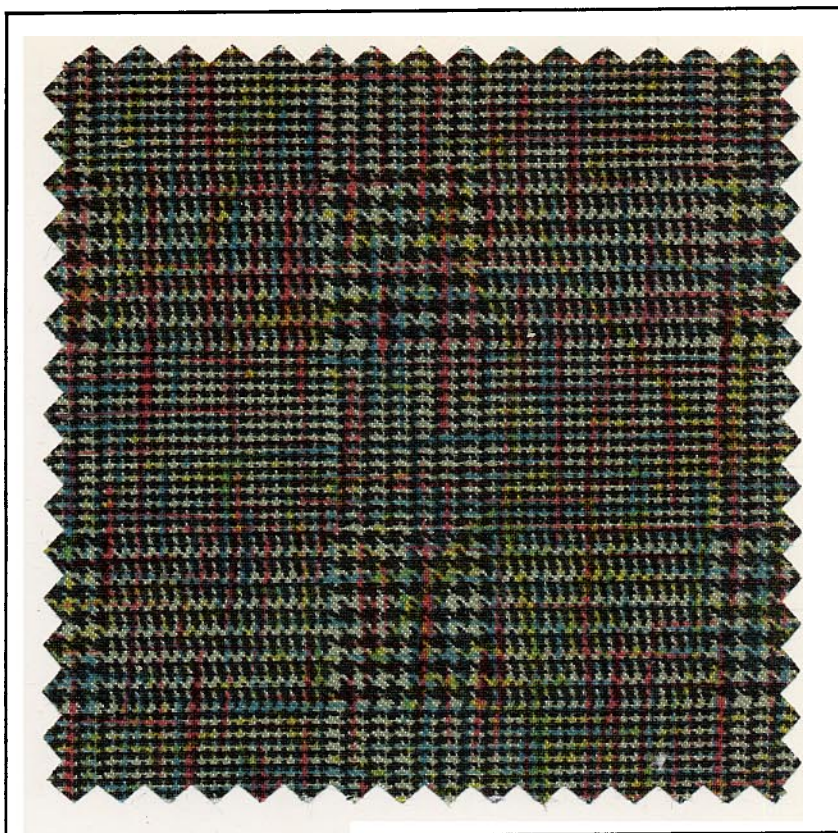
Fabric Combination:

The lengthwise direction (warp yarn) is a spun or filament yarn made of one fiber. The crosswise direction (filling yarn) is a spun or filament yarn made of another fiber.

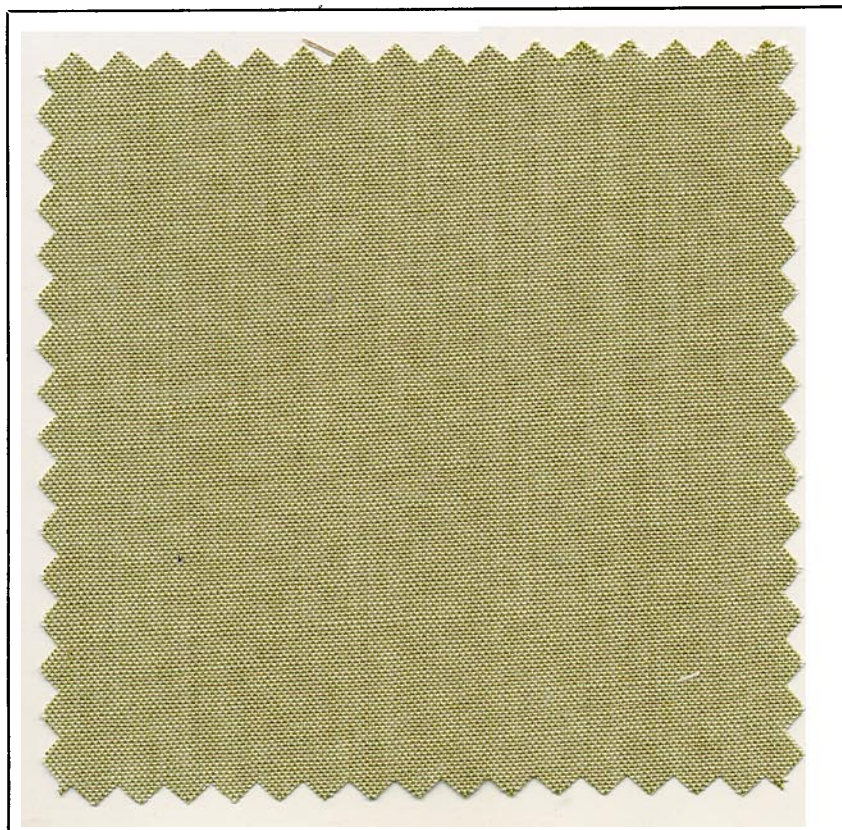
Example:

Warp: Arnel

Filling: Cotton



Salt and Pepper



Fabric Blend:

Two or more fibers are twisted together to make the yarns in both the lengthwise and crosswise direction of the fabric.

Example:

Warp:
65% Dacron
35% Avril

Filling:
65% Dacron
35% Avril

Several terms are used to describe cotton fabrics.

Combed Cotton:

The short cotton fibers are separated from the long cotton fibers by a combing process. This also lays the fibers parallel. High quality fabrics are made of combed cotton yarns. Examples: Organdy, Indian Head, lawn, and many others.



*Mercerized Fine Combed Cotton; crease-resistant finish—
M. & W. Thomas Co.*

Cretonne—F. Schumacher & Co.



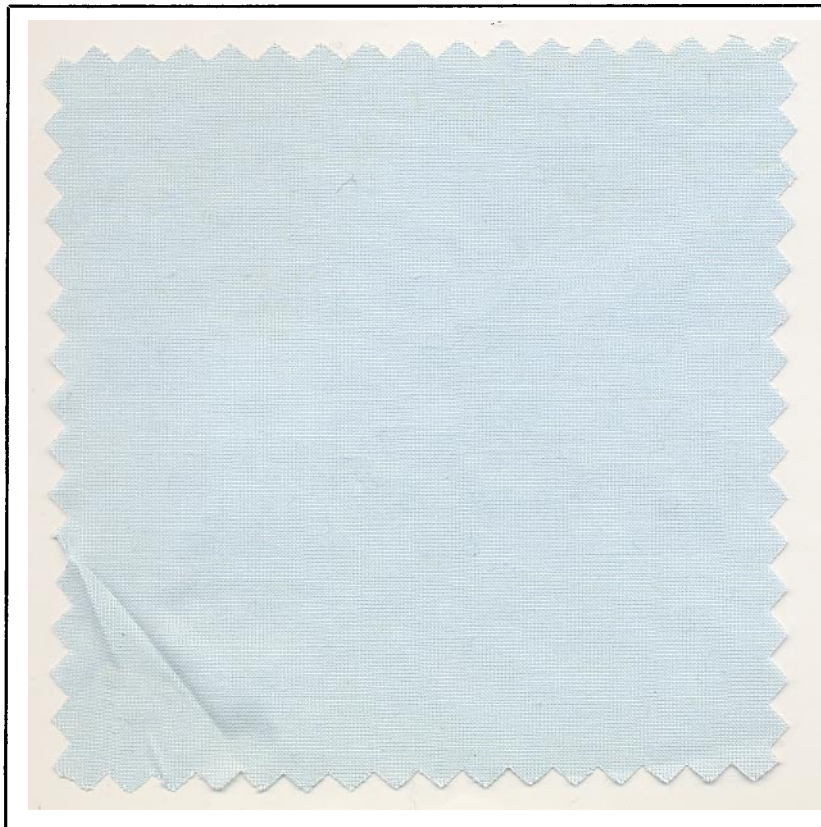
Carded Cotton:

The short, irregular fibers are spun into a yarn. Fabrics that are made with carded yarns are not as smooth or as lustrous looking as fabrics made from combed cotton yarns. Fabrics made from carded cotton may be very durable and serviceable. Examples: Calico, muslin, crash, cretonne and many other cotton fabrics.

Mercerized Cotton:

A mercerized cotton fabric may be made from the chemical treatment of the yarn or the fabric itself. Mercerizing makes a fabric more lustrous, absorbent, stronger, more soil resistant, and more easily ironed. Examples: Broadcloth, nainsook, poplin and many others.

SuPima Chiffon—SuPima Association of America, Spring Mills, Inc.

**Supima Cotton:**

Supima is American extra-long staple cotton grown in Arizona, California, New Mexico and Texas. Its fineness gives luster and a silky appearance to fabrics made of it. Fabrics that meet the standards of the Supima Association of America are identified with a certification mark.

The Federal Trade Commission restricts the use of the term Pima to fabrics made from long, fine staple Peruvian cotton.

Several terms are used to describe silk and synthetic fabrics.

Filament Yarn:

Very small, individual, long, round, smooth threads twisted together. "Multi-filament" means many fine filaments are twisted together to make a single yarn.

Filament Fabric:

A smooth, transparent or opaque, sheer or medium-weight fabric made of filament yarns. Examples: Ninon, chiffon, taffeta, satin, and many others.



100% Nylon Sheer



Spun Yarn:

Filaments of varying length and width are cut and twisted together to make a yarn.

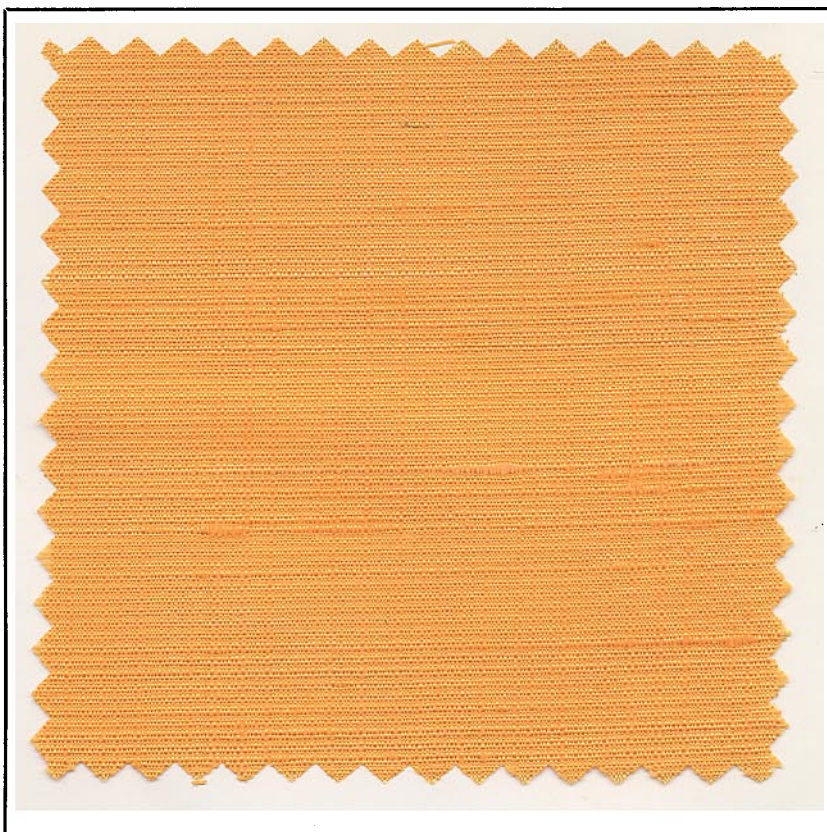
Spun Fabric:

Fabrics made of spun yarns are not as smooth as fabrics made of filament yarns. They are usually opaque. They may be light, medium, or heavy-weight. Examples: Serge, gabardine, suiting fabrics, and others. Some fabrics combine both filament and spun yarns.

You may see certain terms used to describe silk fabrics. For example:

Douppioni Silk:

A yarn that is made of a silk filament that comes from two or more cocoons that have grown together. The filaments are joined together at intervals, thus producing a thick and thin yarn. This property is used to an advantage in making many silk fabrics. Shantung is a typical example.



100% Douppioni Silk

100% Tussah Silk



Wild or Tussah Silk:

These fabrics are made from silk filaments of uncultivated silk worms. The filaments are coarse, uneven compared to cultivated silk. They are used to make heavy-textured silk fabrics.

Silk Noils:

Small silk fibers may be spun into a yarn of one of the natural or synthetic fibers to produce color contrast or to give an interesting texture to a fabric.

Waste Silk:

Short filaments that may come from damaged cocoons, or waste from cocoons used to make cultivated silk yarns may be spun into a yarn and made into a fabric. They produce a thick and thin yarn that may be used to advantage in producing rough textured silk fabrics.

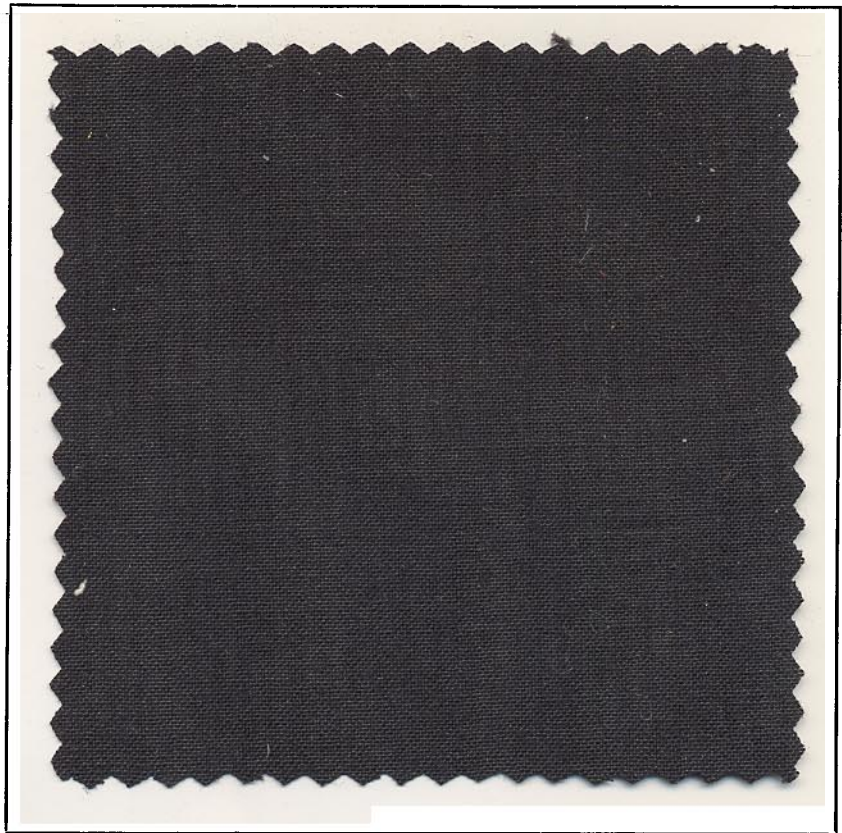
Denier:

This is a term used to measure the weight of a silk or synthetic yarn. It indicates the fineness of the yarn. Low denier yarns are used for sheer filament type fabrics; high denier yarns for heavier weight fabrics. The Orlon fabric illustrated on page 37 is made of 200 denier yarns warp and filling direction. The warp printed taffeta, page 125, is made of a 75 denier warp, 150 denier filling.

Wool fabrics are generally classed and described as: (a) Worsted; and (b) Woolens.

Worsted:

Long wool fibers are laid parallel and spun to make a smooth, even, usually highly twisted yarn. Fabrics made from worsted yarns are hard finished and they have a distinct weave. Examples: Gabardine, cavalry twill, serge, and many others.



100% Tropical Worsted

100% Wool—Milliken Woolens, Inc.



Woolens:

Short wool fibers are twisted together loosely to make a soft yarn. Fabrics made of woolen yarns do not have a distinct weave. Some woolen fabrics are brushed, napped, or given other special surface finishes. Examples: Flannel, cheviot, soft-finished tweeds, and many others.

Bleeding Dyes:

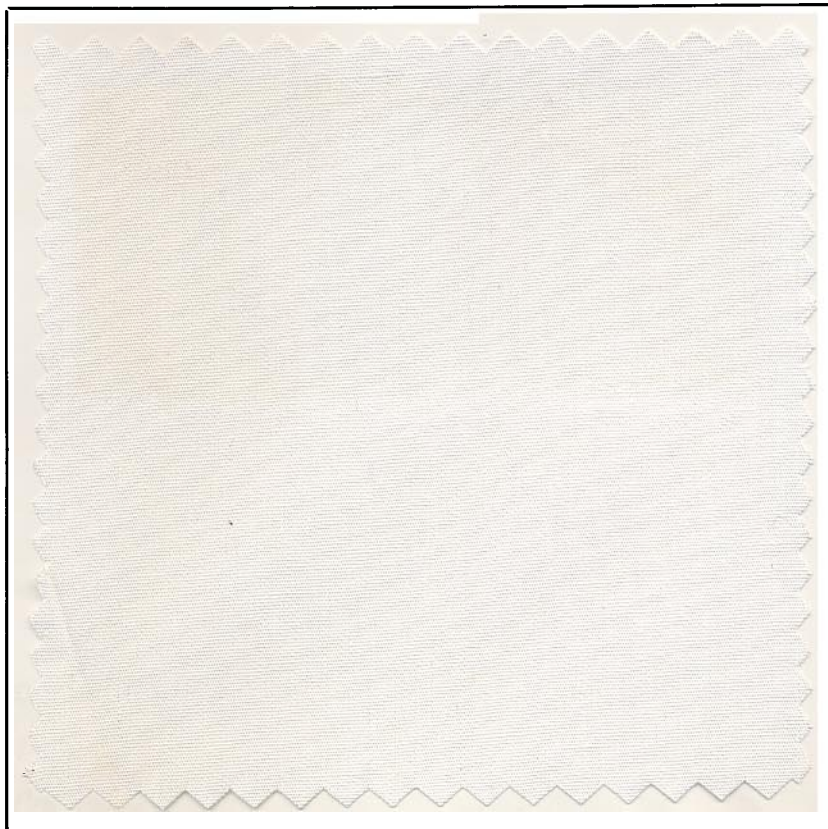
The yarns of Indian Madras are dyed with vegetable dyes. The colors bleed or are fugitive to water. This causes staining of the lighter parts of the fabric. This is desired in a Madras fabric.

Generally, bleeding is a term used to describe loss of color in drycleaning solvents or water because of improper dyeing of the fabric or from the use of poor dye or the wrong class of dye for a particular fiber.



100% Cotton Broadcloth, "Pontamine White SP"—
E. I. duPont de Nemours & Co.

Bleedy-type Madras—S. M. Axelrod and Son



Fluorescent Dyed:

Fluorescent dyes and tints are used to produce a whitening or brightening effect on fabrics. Depending on the compound, a fluorescent brightener may produce a reddish, bluish, greenish, or neutral light.

Fluorescent brightening agents are used on pastel dyed fabrics to make yellows appear paler, pinks more purple, blues brighter and stronger, greens and blues brighter, beige and gray bluer.

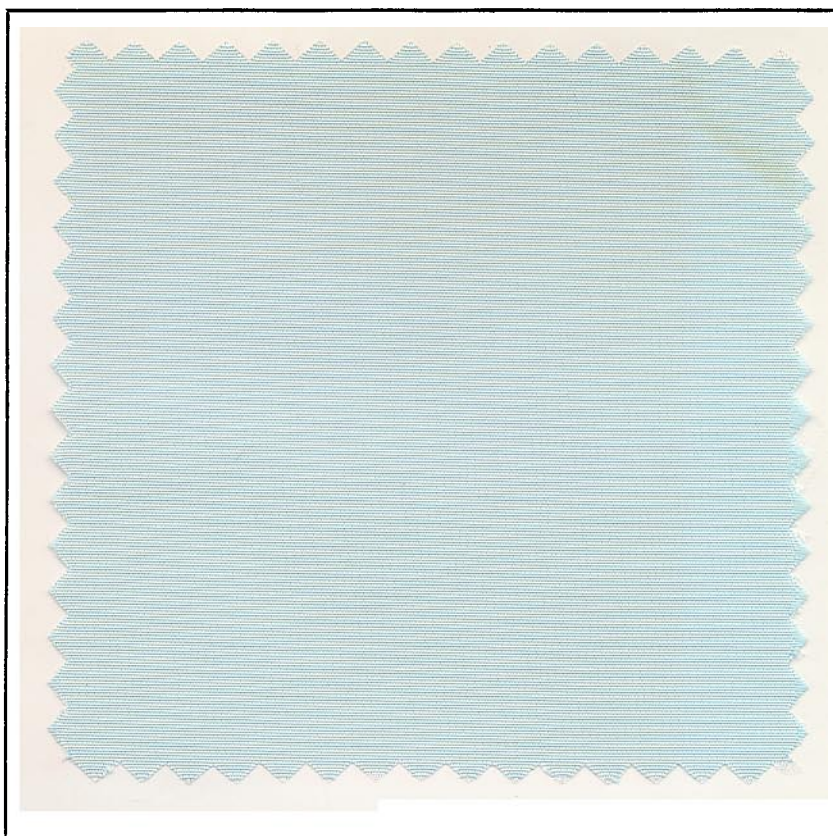
Bright fluorescent dyes are used in printed fabrics to give interesting highlights to the design and background color.

Some new terms have been created to describe definite types of yarns made from synthetic fibers:

Solution-dyed:

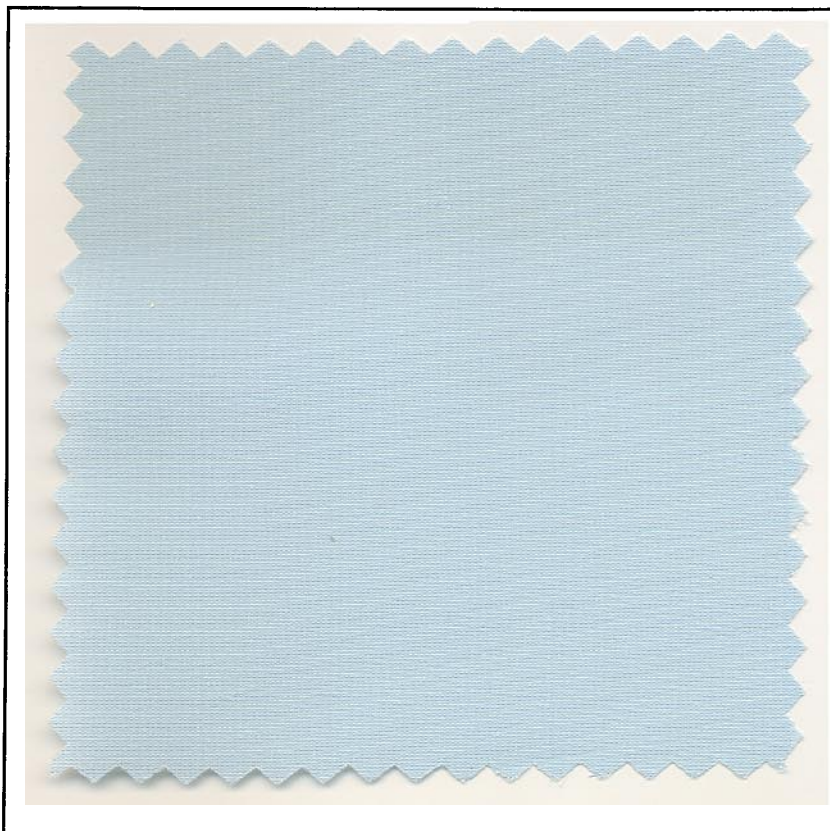
Sometimes called “dope-dyed,” “spun-dyed.” These yarns differ from conventional dyed yarns in that the color is within the fiber. Colored pigments are placed in the solution before it is spun into a yarn. This method gives good colorfastness to light, atmospheric gas fading, perspiration, crocking or rubbing off of color, laundering, and drycleaning.

Filament yarns with color applied at irregular intervals along the length are not classed as solution-dyed yarns because the pigments are not applied in the spinning solution but later in the yarn process and before the curing process.



Solution-dyed Taffeta

Whipped Cream, 100% Dacron



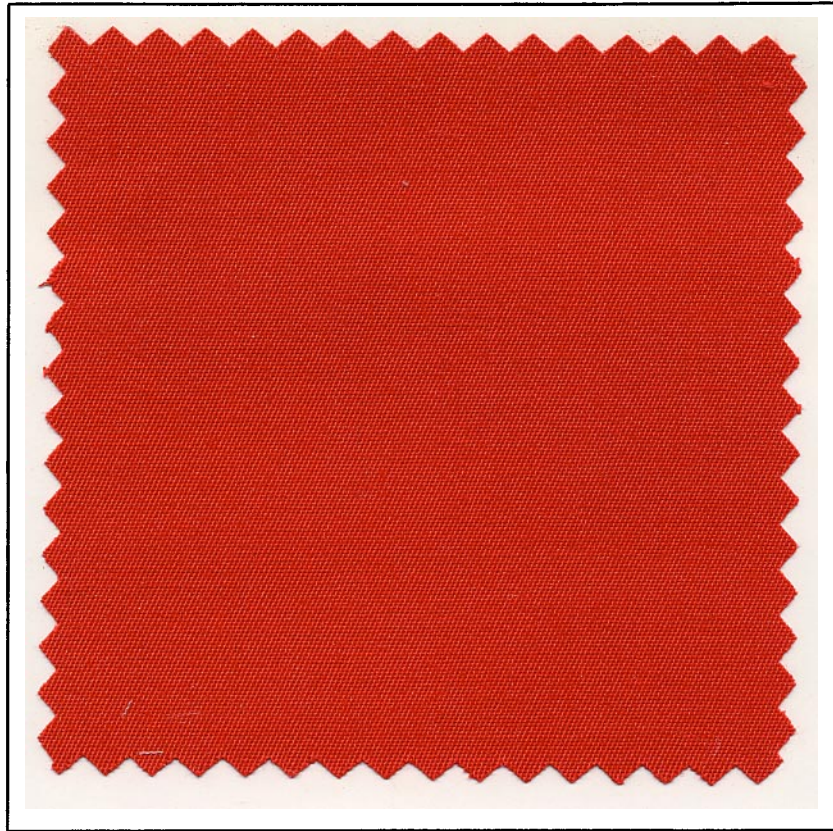
Bulked Yarns (Bulky Yarns):

Bulking processes fluff up yarns giving soft, textured, and opaque effects. Yarns are treated chemically or physically so as to have greater volume or bulk. This bulk may be obtained by fiber loops spaced randomly along the individual filaments of the yarn.

TEXTURED YARNS

TRADE-MARK NAME	MANUFACTURER OR SOURCE	TEXTURING METHOD AND DESCRIPTION	FIBER USED
Agilon (ag-i-lon')	Deering Milliken	Edge crimping process Stretch; no-torque type	nylon, Dacron polyester
Antron 24	DuPont	Bulked trilobal; continuous filament	nylon
Avicron (a-vi-kron)	FMC Corporation	Water-induced Latent-crimp filament yarn	rayon
Ban-Lon	Joseph Bancroft & Sons	Heat-set in stuffing box	nylon, Dacron
Bulked Celaperm	Celanese	Air jet	acetate
Cumuloft	Chemstrand	Continuous filament; modified crimp	nylon
Duclé (du-clay')	C. L. Meyers	Heat-set Bulk yarn; filament	nylon, Dacron
"501" Nylon	DuPont	Bulked trilobal: continuous filament carpet yarn	nylon
Fluflon (fluf'lon)	Leesona	Heat-set under false twist Stretch yarn; false-twist type	nylon, Dacron
Helanca (hé-lán-ka)	Heberlein	Twist, heat-set, untwist Several types; stretch yarn, conventional type; no-torque and modified type.	nylon, Dacron
Lofted Chromspun (chrom'spun) and Estron (es'-tron)	Eastman Chemical	Air jet Bulk, curl- or kink-type	acetate
Mylast (my'-last)	C. L. Meyers	Crimp-type; no-torque	nylon, Dacron
Saaba (sää'bá)	Leesona	False-twist type stretch yarn modified to remove some of the stretch, retain maximum bulk, and controlled surface texture Stretch yarn, modified type	nylon, Dacron
Skyloft (sky-loft)	American Enka	Air jet Bulk yarn; loop-type	rayon
Spunized (spun'-ized)	Spunize Company	Stuffing box followed by heat-setting Bulk yarn, crimp type, filament	nylon, Dacron
Superloft (su-per-loft)	Leesona	Heat-set under false twist Stretch yarn, false twist type, filament	nylon, Dacron, Orlon, Arnel
Synfoam	Synfoam Yarns	Heat-set, false twist Crimped filament	nylon, Dacron
Taslan (taz-lan)	DuPont	Air jet; yarn structure is opened, loops formed, and structure closed again Bulk yarn, loop type	all fibers, including glass
Textralized	Joseph Bancroft & Sons	Heat-set in stuffing box Bulk yarn, crimp type	nylon, Dacron
Tycora (ti-cor-rá)	Textured Yarn Company	Several techniques used. Yarn depends on particular processing technique involved Bulk yarn	acrylic, nylon, poly- ester, Polypropylene
Welderstretch	Blackwelder	Twisted combinations of yarns	nylon with nylon, cotton, rayon, and Orlon

Stretch Yarns:



Form-fitting resilience without pressure or binding is achieved by stretch yarns. Stretch yarns may be classified as follows:

1. Physical and/or chemical modification of textile yarns. See types of Stretch Yarns, page 116. Also see page 331.
2. Elastomers made of Spandex or Orofil. See pages 77-80 and 331.
3. Rubber or synthetic rubber yarns or rubber core yarns wrapped with a textile yarn. See pages 83 and 331.

TYPES OF STRETCH YARNS

Stretch yarns are made by a variety of manufacturing methods. This brief outline, in no way complete, shows the variety of stretch yarns that can be made.

1. *Stretch yarns—Texturing Method*

- a. Conventional—Twist, Heat-Set, Untwist
 - (1). Coil-Type (Torque). Example: Conventional Helenca.
- b. False Twist
 - (1). Coil-Type (Torque). Examples: Fluffon, Superloft, Helenca Hi-Tex, Helenca Sp2, Whitin A.R.C.T.—both type FT and FT-F.
 - (2). Coil-Type (No Torque). Example: Helenca NT.
- c. Edge Crimping
 - (1). Coil-Type (No Torque). Example: Agilon.

2. *Modified Stretch Yarns*

Modified stretch yarns are made by several different methods. Well-known types are listed as:

- Helenca SW (Bouclé)
- Saaba
- Whitin—A.R.C.T.—Types FT-F and FT-S
- Helenca SS
- Agilon (Stabilized-type)

Nylon or Dacron may be used to make the above stretch yarns.

Classification of Stretch Fabrics:

Construction:

Stretch fabrics may be classified by method of fabric construction:

1. *Knitted.* Any basic knit construction may be used to make a knitted stretch fabric.

2. *Woven.* All of the conventional weaves used to make woven fabrics may also be made using stretch yarns.

3. *Laces and laminated fabrics* may also be made of stretch yarns and fabrics.



67% Rayon, 33% Nylon.

Poplin, 60% Dacron, 33% Cotton, 7% Lycra®—E. I. duPont de Nemours & Co., Klopman Mills



Direction of Stretch:

Stretch fabrics may be classified by the direction of the stretch:

1. *Warp stretch.* The stretch yarn runs lengthwise in the fabric.

2. *Filling stretch.* The stretch yarns are woven crosswise in the fabric.

3. *Two-way stretch.* Two-way stretch yarns are being used in slip cover fabrics. The greatest uses of two-way stretch yarns are girdles and bathing suits.

Method of Manufacture:

Stretch fabrics may also be classified by the way they are manufactured. See page 118.

SECTION IV

FINISHES

It is said frequently, "It's the finish that makes the fabric." Finishes are classified into two distinct groups: (1) General finishes—finishes that are peculiar to producing certain fabric types; and (2) Special finishes that give an added quality to a fabric.

Usually in selecting a fabric, consideration is seldom given to the general type finish. These include textile finishing processes that mean little to the average consumer because she does not read or hear about them too frequently. Such finishing processes include bleaching, beetling, brushing, calendering, carbonizing, crabbing, decating, degumming, delusterizing, fulling, lusterizing, weighting, sizing, and many more. It is the special finish that creates the most interest because it gives the added qualities desired in a particular fabric. Special finishes may add beauty as well as practicality to a fabric. Sometimes a special finish may be used to counteract an undesirable quality of a particular fiber or fabric. Many finishes give

more than just one property to a fabric.

When selecting a fabric with a special finish, the following questions should be considered:

1. Will the finish do what is expected of it? For example, in considering a spot and stain-resistant finish, will it resist both water-borne and oily-type stains?

2. Will the finish require special care in laundering, wetcleaning, or drycleaning? For example, will the resin finish discolor if the fabric is bleached with a chlorine-type bleach, or is it a resin finish that can be bleached with a chlorine-type bleach?

3. Is the finish guaranteed to be durable to laundering, wetcleaning, or drycleaning? Or is it semi-durable, requiring the fabric to be re-treated after laundering, wetcleaning, or drycleaning?

We have attempted to list and define some of the special finishes used to give added qualities to some of the fabrics on the market.

Abrasion-Resistant Finish:

A finish applied to a fabric to add high abrasion resistance to fine lining fabrics. It is a process that combines dyeing and finishing linings fast to gas fading. The permanent fastness is accomplished without inhibitors.

TRADE-MARK NAME

Kensation

MANUFACTURER

Kenyon Piece Dyeworks, Inc.

Antiseptic Finish (Bacteriostatic Finish)

This chemical treatment is said to make a fabric bacteria-resistant, prevent decay and damage from perspiration. The treatment inhibits the growth of many bacteria, including odor-causing germs. The chemicals used are mostly quaternary ammonia compounds. Some are also claimed to be mildew-resistant. Some additives may be added to the spinning solution of rayon and acetate rather than applying chemical treatment to the surface of the finished fabric.

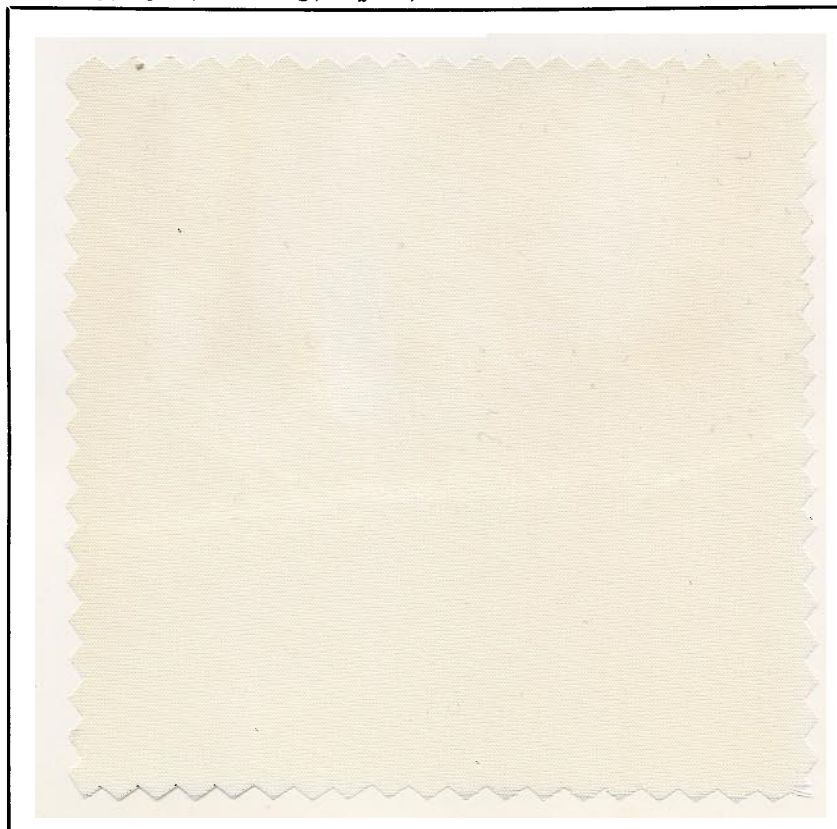
TRADE-MARK NAMES

Cyana Guard (American Cyanamid)
Dura-Fresh (Sanitized, Inc.)
Eversan—a wash-resistant finish (Ions Exchange and Chemical)
Permachem (Permachem Corp.)
Sanitized—a durable finish (Sanitized, Inc.)



*Earl-Glo® linings—Sanitized® for lasting freshness—
N. Erlanger, Blumgart & Co., Inc.*

Antron®, Nylon, Dacron®, Taffeta; Aston. 886—J. P. Stevens and Co., Inc.



Anti-Static Finish:

This is a chemical treatment applied to a fabric to prevent the accumulation of static electricity. The synthetic fibers tend to generate static electricity. When static electricity is accumulated, a fabric clings to the body or to another garment. An anti-static finish adds a water-attracting chemical to the fabric. This helps to carry off the electric charges. Some of these finishes are removed in dry-cleaning. This may leave a harsh feel to the fabric.

TRADE-MARK NAMES

Anti-Static Agent 575 (E. F. Houghton & Co.)
Arko Stat-Ex W (Arkansas Co., Inc.)
Concostat (Continental Chemical Co.)
Astron 886 (Onyx Chemical Co.)

Crisp Finish:

Chemical finishes applied to cotton, rayon, nylon sheers to make them stay crisp during wear, laundering, wetcleaning, and drycleaning. Such finishes will also help to keep corners of sheer fabrics from rolling.

TRADE-MARK NAMES

Aquatize (Dixo Co., Inc.)
Fresh-TEX (Cranston Print Works Co.)



Fresh-TEX—Cranston Print Works Co.

Dri-Smooth—Cranston Print Works Co.



Chlorine-Resistant Finish:

A chemical treatment to cottons and other cellulosic fibers and their blends, to prevent the damage and yellowing which occurs on resin-treated fabrics when they are bleached with chlorine-type bleaches.

TRADE-MARK NAMES

Ban Care (Joseph Bancroft)
Belfast (Deering Milliken Research Corp.)
Dri-Smooth (Cranston Print Works Co.)
Everglaze Keetide (Joseph Bancroft)
Prestwick (Courtaulds North America, Inc.)

**Crease-Resistant Finish
(Wrinkle-Resistant):**

A chemical treatment applied to make fabric resistant to creasing and to help it recover from wrinkling after wear. Sometimes combined with a water-repellent to resist staining. Durability of the finish depends on fiber content, fabric construction and chemical applied. The finish can be a disadvantage in resetting pleats, creases and hemlines. Crease resistance may also be achieved through natural resistance of some fibers and the use of highly twisted yarns.

TRADE-MARK NAMES

Cyana Superset (Cyanamid)
Wrinkle-Shed (Dan River Mills)
Everglaze (Everglaze)
Tebilized (Tootal)
Unidure (United Piece Dye Works)
Plus X (Stevens)



Success, 86% rayon, 14% acetate. Processed for Wrinkle Resistance

100% Nylon, Embossed finish—William Winkler, Inc.



Ciré:

Ciré is a finish applied to fabrics and laces to produce a very high, patent-leather like luster. There are two methods used to create this effect:

1. Wax is applied to the fabric under heat and pressure. This finish has limited durability.
2. Fabrics made of heat-sensitive fibers may be embossed to create a high luster finish on the surface of the fabric. This finish is durable.

Crush-Resistant Finish:

A resin treatment is applied to pile fabrics in order to keep the pile from crushing. Some of these resins are not permanent to dry-cleaning; others perform satisfactorily. Cases are on record where the resin on some velvets has decomposed during wear and drycleaning, resulting in an odor. (See Syl-Mer ® Finished Rayon Pile Velvet, page 307.)

Flame-Resistant Finish:

A chemical treatment that prevents fabric from burning rapidly. This finish is important on fleecy or napped surfaces; some drapery fabrics; some thin, sheer fabrics. Some are removed in drycleaning and must be reapplied. Some fabrics, like wool and nylon, are naturally flame-resistant. The Flammable Fabrics Act passed in 1954 provides that no wearing apparel subject to the Act may be sold if it does not pass prescribed tests.

TRADE-MARK NAMES

APO-THPS (National Cotton Council)
Conco Finish FR (Continental Chemical Company)
Fi-Retard® NBX (Arkansas Co., Inc.)
Tex-Proof (Perma Dry Co., Inc.)
Pyroset (Perma Dry Co., Inc.)
Proban (Proban Ltd. & Bradford Dyers Association Ltd.)



"Mille Fleurs," West German Import; flameproofed, Pyroset Finish—Perma Dry Co., Inc.

GLF Blue



Fume Fade-Resistant Finish: (Atmospheric or gas-fading resistant)

Sometimes called "inhibitors," "restrainers." Used on acetate and Arnel to prevent color changes caused by oxides of nitrogen in the atmosphere. Fading is counteracted by changing the physical surface properties of the acetate fiber. Some finishes are fairly durable; others are removed in laundering and drycleaning. Some manufacturers regard application of anti-fume finish as a method of cutting corners. They claim best protection is achieved through proper selection of dyes that contain an inhibitor.

TRADE-MARK NAMES

G.P. (Gasproofed) (Bradford Dyeing Assn.)
Kensation (Kenyon Piece Dye Works)
Unifast (United Piece Dye Works)

Glazed Finish:

Glazed surfaces may be achieved through mechanical means or through treatment of the fabric with a resin. Mechanical finishes have limited durability. The life of these finishes can be prolonged by care in laundering and dry-cleaning. (See Glazed Chintz, page 369.)

Insulated Finish:

(Sometimes called "reflective finish.") Metallic or colored particles are bonded to drapery or garment lining fabrics of various types of construction. Fabrics so finished are sold under various brand names. Some dry-clean very well; others lose part or all of the metallic particles. Performance depends on the base fabric, the binder used, and the conditions of curing time. (See pages 209 and 311.)

Lamination:

Laminates are made by bonding:

- (1) Fabrics to polyurethane foam.
- (2) Leather and simulated leather to foam.
- (3) Simulated leathers to fabric.
- (4) Fabric to fabric.
- (5) Fabric to film.

Whether laminates may be drycleaned or wetcleaned depends on:

- (1) The fabric used.
- (2) The method and conditions of bonding.
- (3) The binder or adhesive used.
- (4) Garment construction.

(See pages 301, 302, 303, 304.)

Mildew-Resistant Finish:

A chemical finish applied to a fabric that is susceptible to mildew. This finish may be combined with other finishes, such as water-repellents. (See page 143.)

TRADE-MARK NAMES

Congo GD (Continental Chemical Co.)
Cyana Stay-Tuff (American Cyanamid)

Minimum-Care Finish:

The finish that is applied to the fabric makes it have a wearable appearance when it is laundered or wetcleaned by the standard methods, but requires little ironing or finishing. "Wash-and-Wear" finish gives the fabric a good appearance after standard methods of laundering or wetcleaning, without any ironing. Some of these finishes have been known to decrease the strength of the fabrics. A new process has been developed which substantially reduces the weakness imparted to cotton fabrics by wash-and-wear treatments. The process permits manufacturers to use lighter fabric constructions and those with lower initial strengths. (See pages 127 and 144.)

TRADE-MARK NAMES

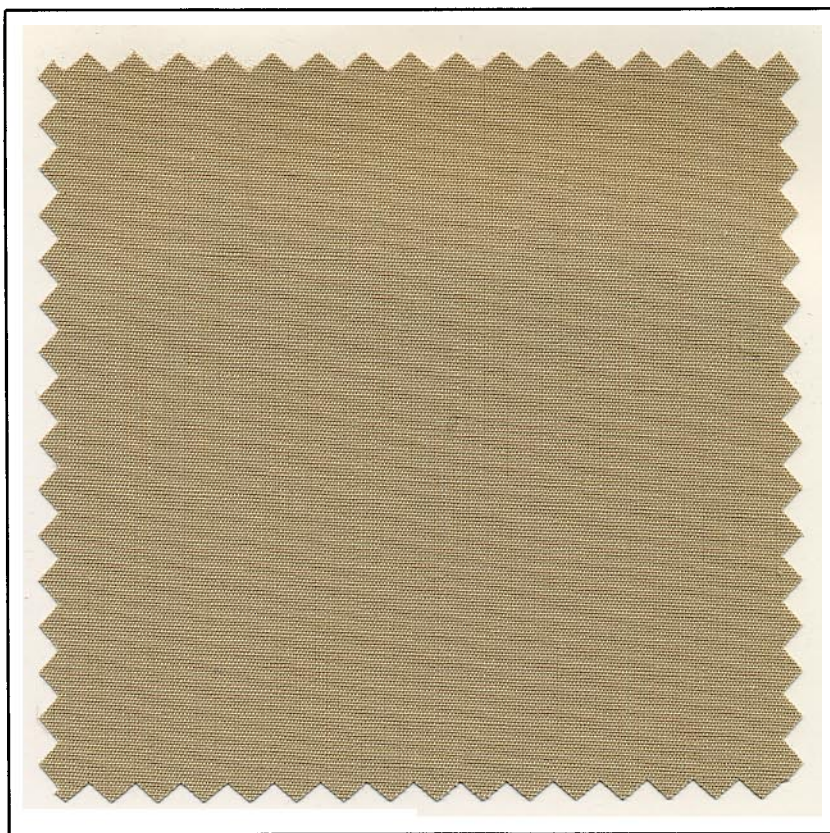
Bates Disciplined (Bates Fabric, Inc.)
Belfast (Deering Milliken Research Corp.)
Chartered (Pepperell)
Coneset (Cone Mills, Inc.)
Dela-Shed (Cold Spring Bleachery)
Dri-Smooth (Cranston Print Works Co.)
Everglaze-BanCare; Mincare; Tutored (Joseph Bancroft & Sons)
Permafresh (Sun Chemical Corp.)
Perma-pressed (Avondale Mills, Inc.)
Prestwick (Courtaulds North America, Inc.)
Sanforize Plus (Cluett Peabody & Co.)
Super-Kwick-Kare (Reeves Bros.)
Suttamatic; Super Suttamatic (Wamsutta Mills)

**Microporous Finish:
(Waterproof Finish)**

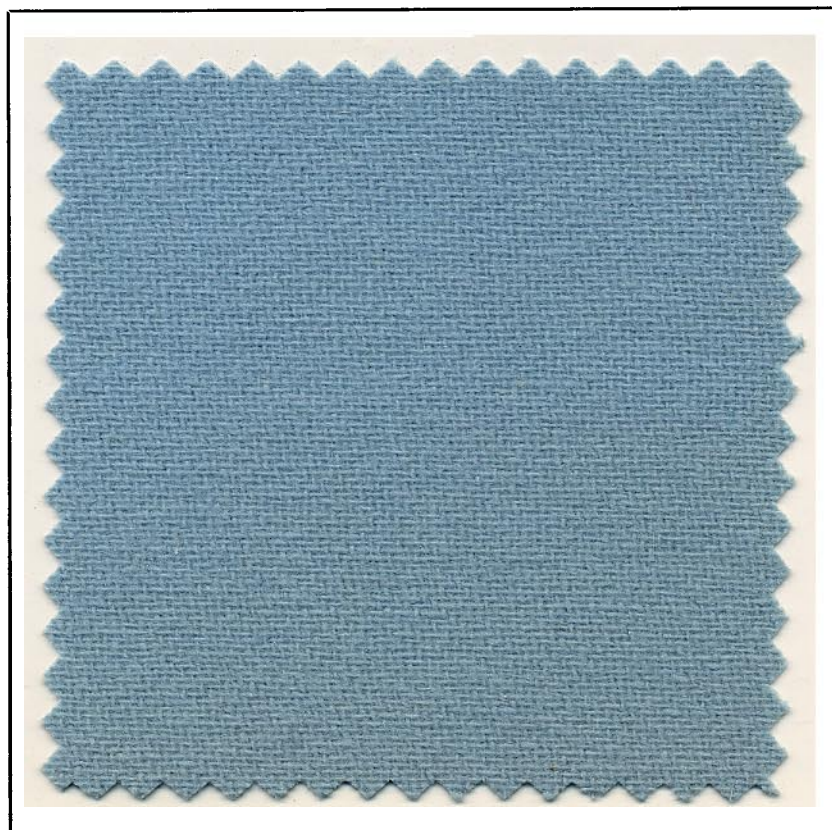
A microporous film is applied to the back of the fabric. Although the film appears to be solid, it has millions of tiny cells called "micropores." These cells are too small to permit wind and rain to penetrate but they do allow passage of body vapors. This finish is used for rainwear and outerwear fabrics.

TRADE-MARK NAMES

Reevair (Reeves Brothers, Inc.)



Reevair, 65% Dacron, 35% cotton—Reeves Brothers, Inc.



Moth-Resistant Finish:

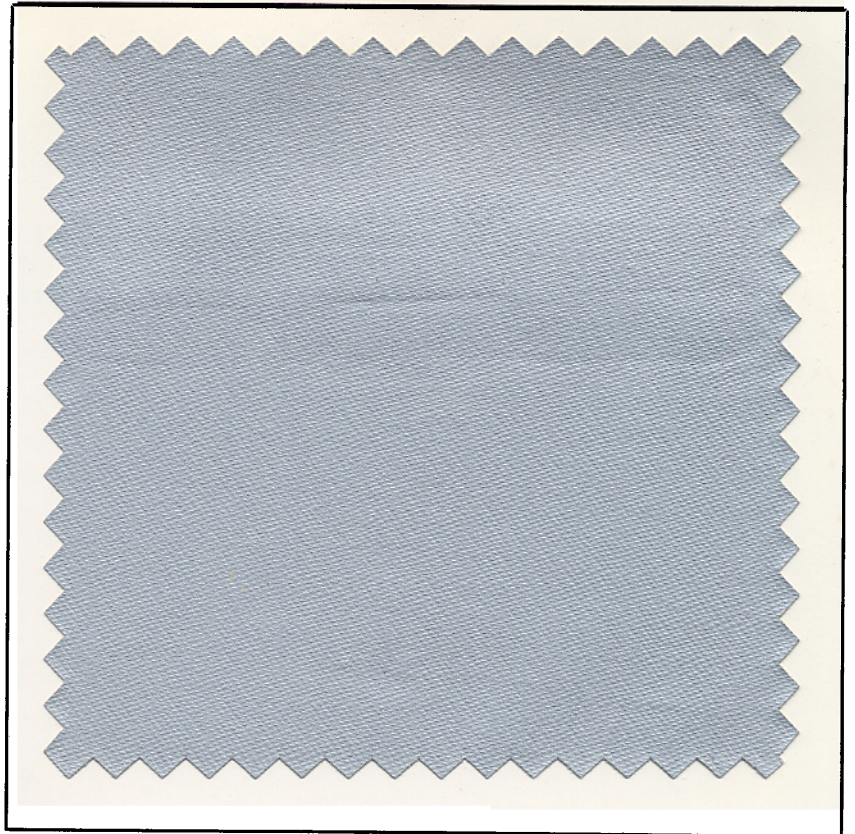
A chemical treatment that makes wool resistant to attack by the larvae of moths. It is advisable to ask these questions at the time of purchase: "How long will the finish last? Does the fabric require special care?" Drycleaners can treat garments and household items to give them a moth-resistant finish.

TRADE-MARK NAMES

Berlou Mothspray (Berlou Mfg. Co.)
Dieldrin (Shell Chemical)
Drewclad (Drew Chemical Co.)
Mitin (Geigy)
Moth Snub (Arkansas Company)
Woolgard (Apex Chemical Company)

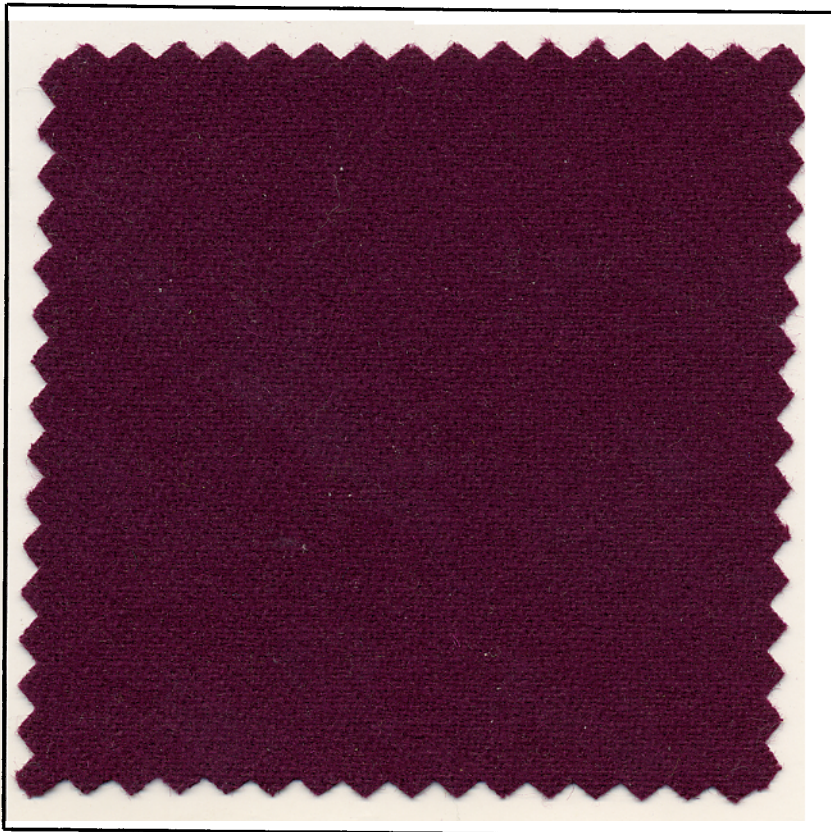
Opaque Finish:

These finishes are formulated coatings applied to the back of drapery lining fabrics to resist the transfer of light through the fabric. Fabrics with this finish can be drycleaned by a petroleum solvent method of cleaning. Cleaning by a synthetic solvent method may result in removal of the coating, stiffening of the fabric, or both.



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

100% Wool—Presensitized



Presensitizing:

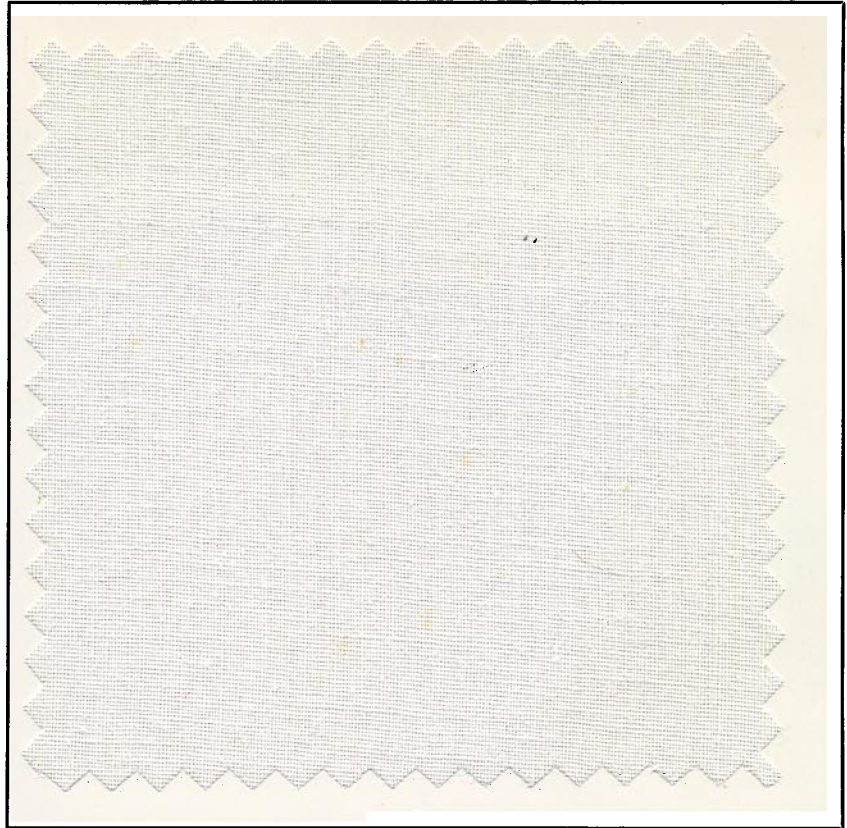
Dyed wool fabrics are presensitized with a special, non-resinous, wool-setting chemical (monoethanolamine sulfite). Once applied it remains in the wool fabric until it is activated with water and steam. When so activated, it sets the formed pleats or creases permanently. Treated fabrics will still be subject to normal felting shrinkage when agitated in water and detergent. Therefore, permanently pleated or creased garments should be drycleaned. The process was developed by the Wool Bureau's WB-5 Process.

Perfumed and Odorless Finishes:

Many finishing materials have an unpleasant odor. These odors are masked by deodorants. The textile industry makes use of "deodorants" that mask one scent by adding another. Some firms are adding fragrant odors to give fabric a "perfumed" odor.

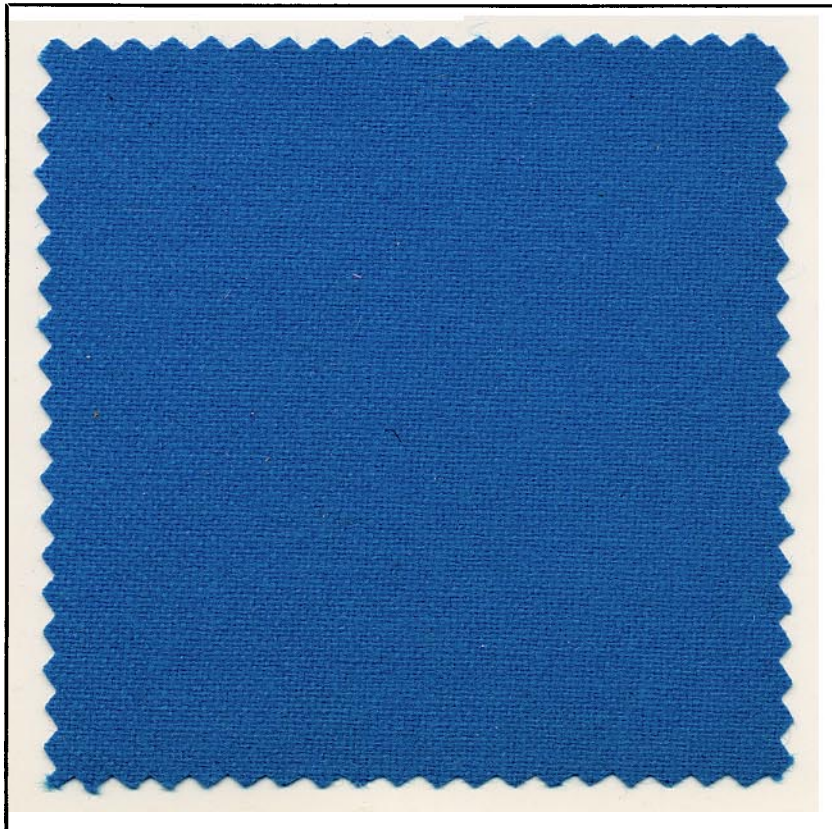
Permanent Finish:

A term that is used to describe various treatments given to fabrics so that they will retain their original finish. This may be a relative term in some cases. Some so-called "permanent finish" may last the life of the garments; others may be less durable.



*Crinolast® durable resin finish—
Chicopee Mills, Inc.*

100% Wool—Milliken Woolens, Inc.



Permanent Gloss or Luster:

Many times a mechanical finish used to produce a luster or gloss on a wool is lost in wear and drycleaning. Through research new standards of performance for wool fabrics have been established. The fabric retains its original appearance with drycleaning and steam finishing or pressing. The fabric is also stabilized and does not require sponging before cutting. Garments can be cut to true size and will not shrink out of fit.

Perspiration-Resistant Finish:

A chemical finish applied to a fabric to make it resistant to the damage caused by body perspiration. This finish finds widest use in the garment lining field. (See Antiseptic Finish; Bacteriostatic Finish, page 123).

TRADE-MARK NAMES

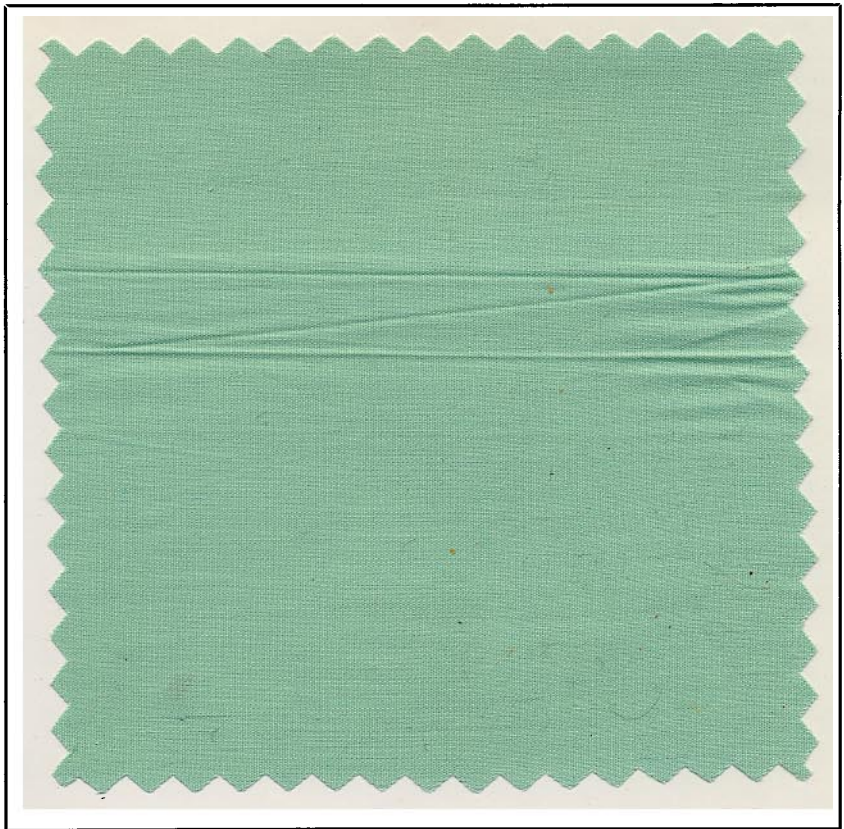
Cyana
Eversan
Sanitized
Unifast
Unidye

MANUFACTURERS

American Cyanamid
Ions Exchange and Chemical
Sanitized, Inc.
United Piece Dye Works
United Piece Dye Works

Shrink-Resistant Finish:

(Mechanical method.) In the textile mill, relaxation shrinkage is eliminated by overfeeding a fabric onto a drying frame and applying stretch in the crosswise direction of the fabric; or, applying controlled compression forces parallel to the surface of the fabric, pushing together the warp yarns, thus releasing the weaving strains. Fabrics so treated may have less than 2% shrinkage in the warp and filling direction. One company has combined the following performance standards with their shrinkage control standard: crease resistance, tensile strength, tear strength and smoothness after wet-cleaning or laundering.



Zeset, Carbeton Mills.



Shrink-Resistant Finish:

(Chemical method). This type of shrinkage control may be obtained in the textile mill by: (a) mercerization; (b) resin impregnation; (c) acetylation; (d) cellulosic. Resin impregnation of some of the synthetic fibers can result in stabilizing a fabric, thus controlling the shrinkage of a fabric in laundering and drycleaning.

DIMENSIONAL STABILITY

TRADE-MARK NAMES

Biella Shrunk Process
Cyana Shrinkage Control
Dylanize
Lanaset
Sanforized
Sanforset
Schollerized
Zeset

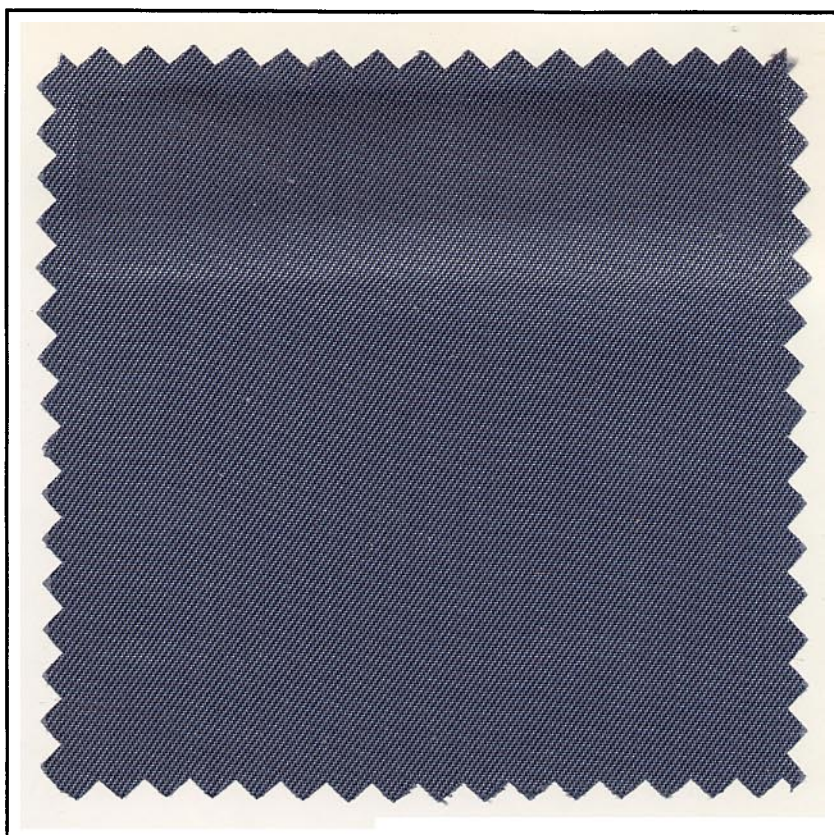
MANUFACTURERS

Saporta Trading Agency Co.
American Cyanamid
Stevenson, Inc.
American Cyanamid
Cluett Peabody & Co.
Cluett Peabody & Co.
Scholler Bros.
E. I. duPont

Slip-Resistant Finish:

This finish is applied to a fabric to keep the yarns in place so that they will not slip over one another. This finish has received wide application in fabrics made of the synthetic fibers. This finish also serves to keep seams from fraying.

The textile manufacturer has many products available to impart this finish. However, trade names are seldom merchandized to the consumer.



*Rayon Twill—non-slip finish—
N. Erlanger, Blumgart & Co., Inc.*

Sailcloth; Scotchguard® Finish—



Stain and Spot-Resistant Finish:

These finishes may be the same as crease-resistant finishes, water-repellent finishes, or both. Some of these finishes resist water-borne stains; others resist oily-type stains; still others may resist both oily and water-borne stains. Some fabrics treated with these finishes, once stained, absorb and hold the staining substance tenaciously, making spot and stain removal very difficult.

(For classification, see page 143).

STAIN AND SPOT-RESISTANT FINISH

TRADE-MARK NAMES

Cravenette-Long Life; Super Silicone
Cyana Permell Plus
Hydro-Pruf (Silicone)
Permell Plus
Scotchgard (Fluorochemical)
Syl-Mer (Silicone)
Unisec
Zepell (Fluorochemical)

MANUFACTURERS

The Cravenette Company
American Cyanamid
Arkansas Company, Inc.
American Cyanamid
Minnesota Mining & Mfg. Co.
Dow Chemical Company
United Piece Dye Works
E. I. duPont

Softeners:

A good "hand" or "feel" is an important aesthetic property of knitted and woven fabrics. To achieve this property, manufacturers may use reagents called "softeners." Some of the softeners used are quite durable; others may be removed in drycleaning and wetcleaning. When this occurs the fabric may have a harsh hand or feel.

TRADE-MARK NAMES

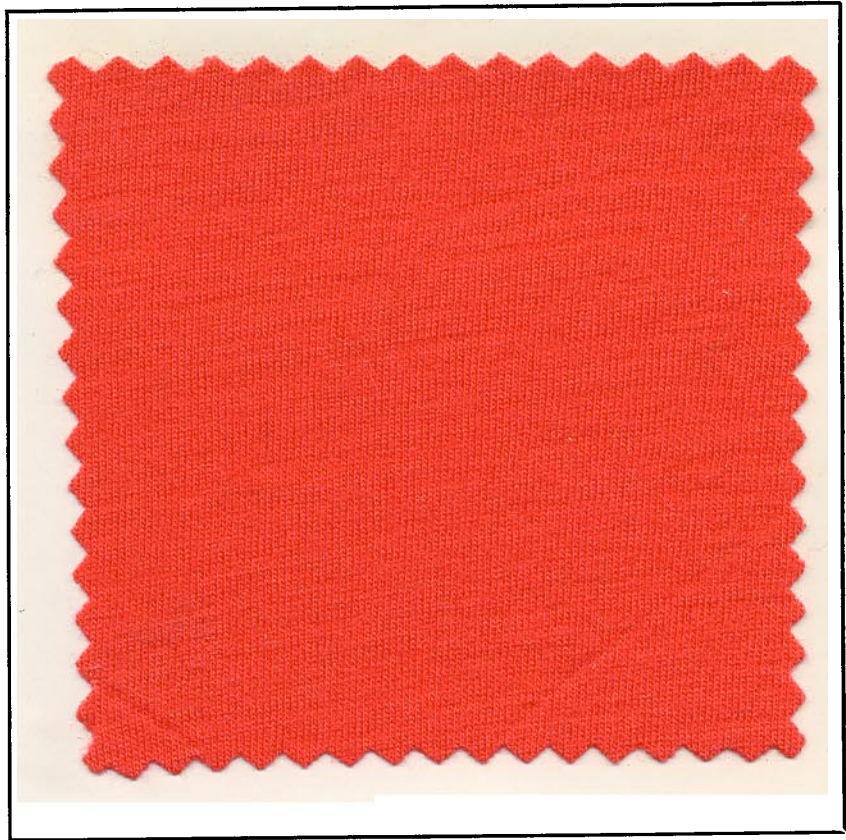
Ahcovil
Arkolube
Brosco-Tex
Cinsoft NGR
Creamoyl
Dura Beau
Polyeen

MANUFACTURERS

ICI Organics, Inc.
Arkansas Co., Inc.
Scholler Bros., Inc.
Cindet Chemicals, Inc.
Scholler Bros., Inc.
Scholler Bros., Inc.
Scholler Bros., Inc.

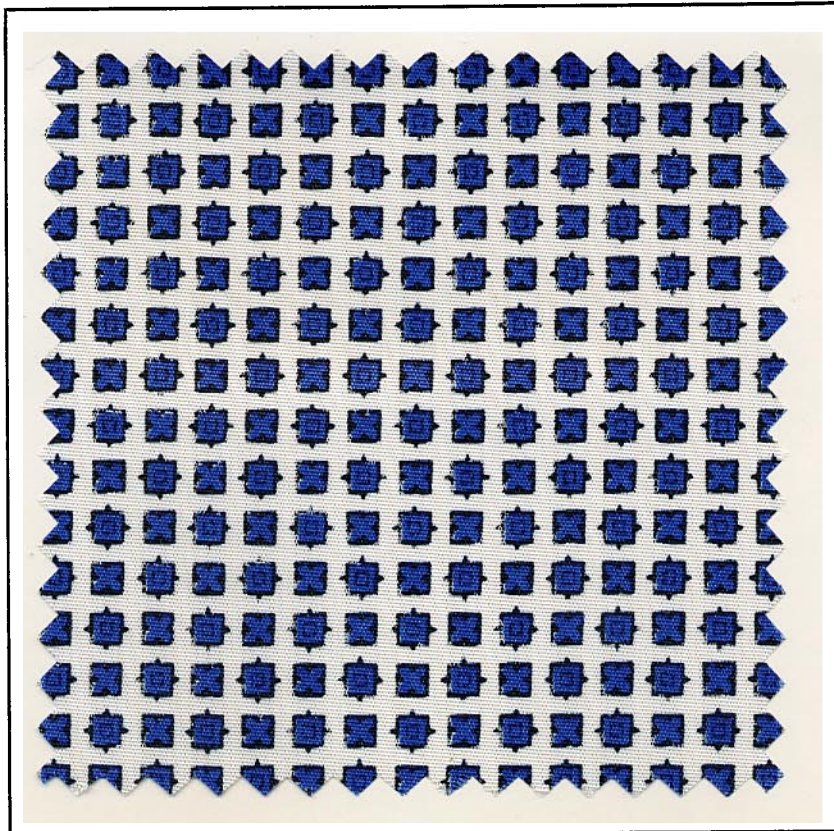
Stretch and Sag-Resistant Finish:

(To impart dimensional stability). Many finishes used for this purpose are combined with the finishes used to make fabrics resistant to shrinkage. Some of these resist laundering; others resist drycleaning. Some are removed in laundering and in drycleaning.



Sag-no-mor—100% Wool Jersey

Taffetized Taffeta, Water Repellent



Solvent-Soluble Finish:

There are some textile finishing agents that may be affected by mechanical action of the cleaning operation, or may be soluble in the drycleaning solvent. In most cases, these finishes can be reapplied to the fabric.

Taffetized Finish:

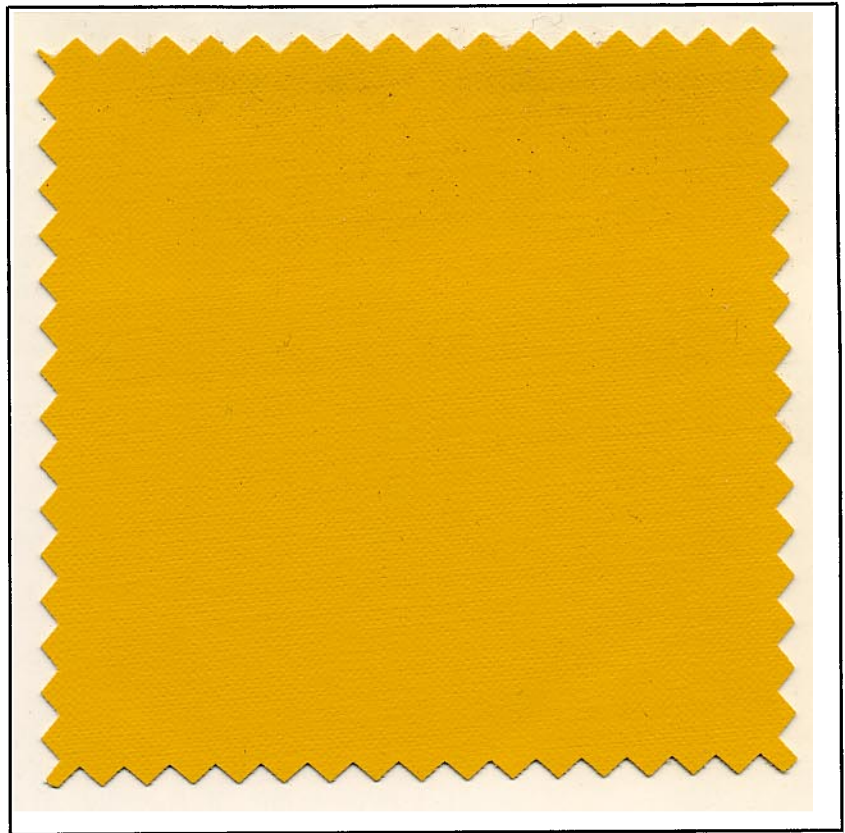
This is a lacquer-type finish applied to taffeta, crepe, shantung, faille, satin to give the fabric a crisp hand and feel. (See Taffetized Taffeta, page 141.)

Vistaglass Finish:

Vistaglass is a finish applied to glass fabrics. It is the trade-mark name of Burlington Industries. The Vistaglass process is a two-fold operation: (1) replacing the old form of heat cleaning and weave setting (namely corozing), with the new patent Vistaglass, a no-flame process developed by Hess Goldsmith, (2) combined with a new finish that results in a much stronger fabric. The finish makes possible a dull mat appearance that improves the opacity; a whiter white that is lasting; an improved hand and colorfastness properties.

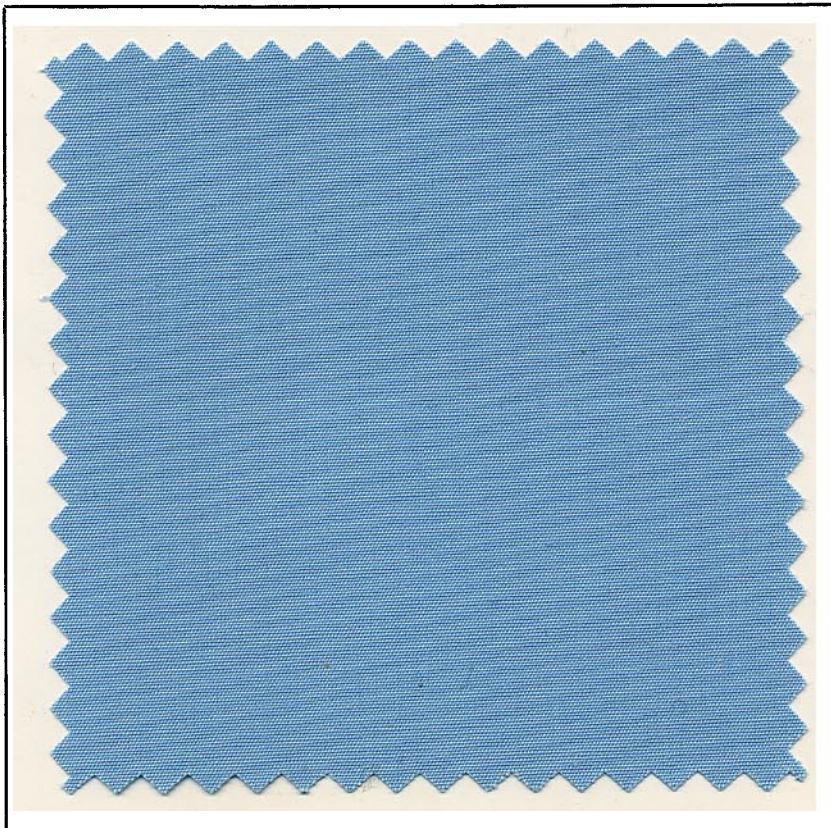
Waterproof Finish:

This finish is made by applying rubber, lacquer, linseed oil, or a synthetic resin to a fabric. These materials close the pores of the fabric and do not permit it to breathe. Some of these materials stiffen in drycleaning. Fabrics so treated should be wetcleaned. (See Microporous Finish, page 131.)



(Waterproof) Dacron[®], Cotton blend, Acrylic finish—Aldan Rubber Co.

Hydro-Pruf C® durable water-repellent finish—
Arkansas Company, Inc., Pilot Mills, Inc.



Water-Repellent Finish:

Water-repellents may be classed in three basic groups: (1) Pyridinium compounds, (2) Silicones, and (3) Fluorochemicals. The finish makes fabrics resistant to rain, but not waterproof. Water-repellent finish permits fabric to breathe, allowing passage of air, water, vapor, and perspiration through it. Water-repellent fabrics are more comfortable to wear than waterproof fabric. Some finishes are “durable”; others “non-durable” to drycleaning. These may be labeled “renewable.” The latter are usually wax emulsion types. Water-repellent fabrics should be retreated after drycleaning. Durable-type finishes give better serviceability after drycleaning and retreatment. (See pages 205, 207.)

WATER-REPELLENT FINISH

TRADE-MARK NAMES

Aquagard
Cravenette-Long Life; Plus;
Super-Silicone
Cyana Permel Plus
Drusil
Hydro-Pruf
Impregnole
Norane
Permel Plus
Perma Silene
Ranedare Plus
Repelotex
Scotchgard
Syl-Mer
Zelan
Zepel

MANUFACTURERS

Solvol Chemical Co., Inc.
The Cravenette Company

American Cyanamid
Drew Chemical Company
Arkansas Company, Inc.
Sun Chemical Company
Sun Chemical Company
American Cyanamid
Refined Products Company
Metro-Atlantic, Inc.
Onyx Chemical Company
Minnesota Mining and Mfg. Co.
Dow Chemical Company
E. I. duPont
E. I. duPont

Water-Soluble Finish:

Some textile finishes used to impart certain characteristic finishes to fabrics, such as gelatin, starches, gums, glues, are removed by any contact with water in spotting, drycleaning, wetcleaning, or laundering. Many of these finishes can be replaced by the drycleaner. (See buckram, page 367; crinoline, page 371.)

Wrinkle-Resistant Finish:

This finish is applied to a fabric to make it resistant to wrinkling and to help it recover rapidly from wrinkling after wear. The effectiveness of the finish depends on the fiber content of the fabric; the construction of the fabric; and the particular chemical formulation applied to it. Some of these finishes are combined with water-repellent finishes and seem to have the power to resist water-borne stains and soil. They iron or finish more easily. This property may work to a disadvantage. A garment may fail to take a press, making the seams, collars, cuffs, hemlines look wrinkled instead of pressed. Some of these finishes have been known to cause loss of strength to some fabric constructions. (See Crease-resistant Finish, page 127.)

SECTION V

FABRIC DESIGN

Fabrics have eye-appeal because of their color or design, as well as the particular finish.

Fabrics were dyed before they were ever given decorative treatments to add variety and beauty. Prior to 1856, only natural dyestuffs were used. These were derived from natural plant and animal life.

Since 1856, most of the dyes used to color fabrics are derived from coal tar products. It is impossible for the consumer to know or recognize the many different types of dyes or how they perform in wear, drycleaning, wet-cleaning, or laundering. Some consumers have come to recognize the fact that "Vat Dye" on a label or selvage of a fabric, gives some assurance of good performance. But beyond that, little is known of the performance that may be expected from basic, acid, direct, azoic, diazo, acetate, sulphur or mordant dyes. We can only rely on the integrity of the dye industry to expect and get good colorfastness performance

in the dyed and printed fabrics we purchase.

The methods by which fabrics get their particular design have always been of interest. For purpose of discussion, we may group fabrics according to design into two classes:

1. Structural;
2. Decorative.

Structural designs are those that are achieved by:

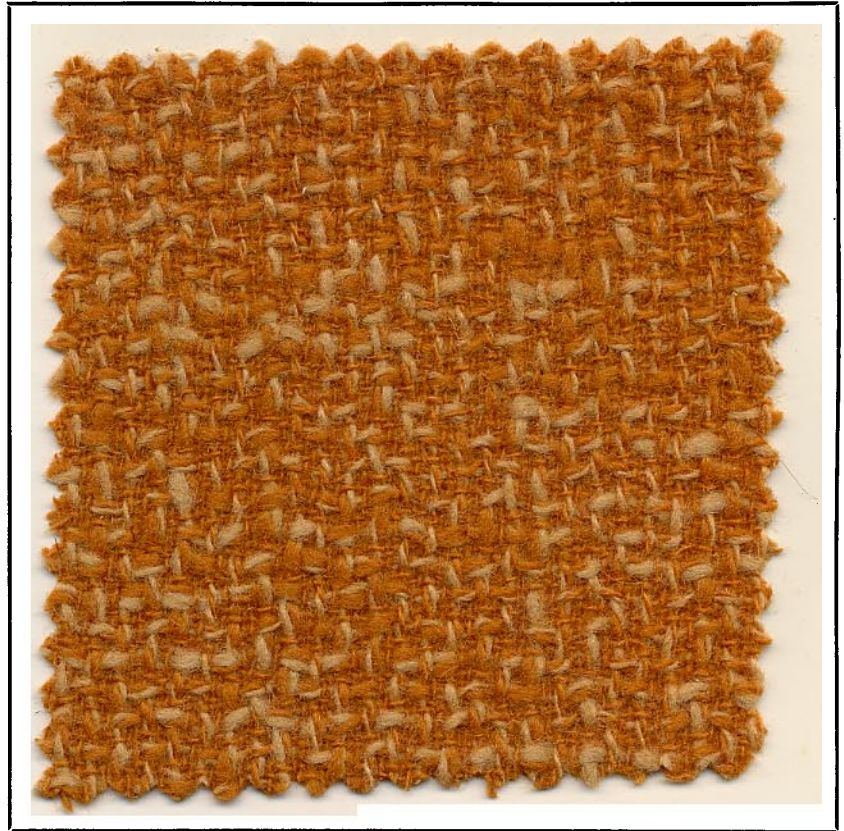
1. The combining of colored fibers to create a particular effect;
2. The combining of yarns to make a particular design;
3. The introduction of novelty type yarns;
4. Making basic weave designs, such as the dobby and Jacquard patterns; and
5. The introduction of a yarn or yarns to form a design on the background weave.

Examples of structural designs are shown and described on the following pages.

A.
**STRUCTURAL
DESIGN**

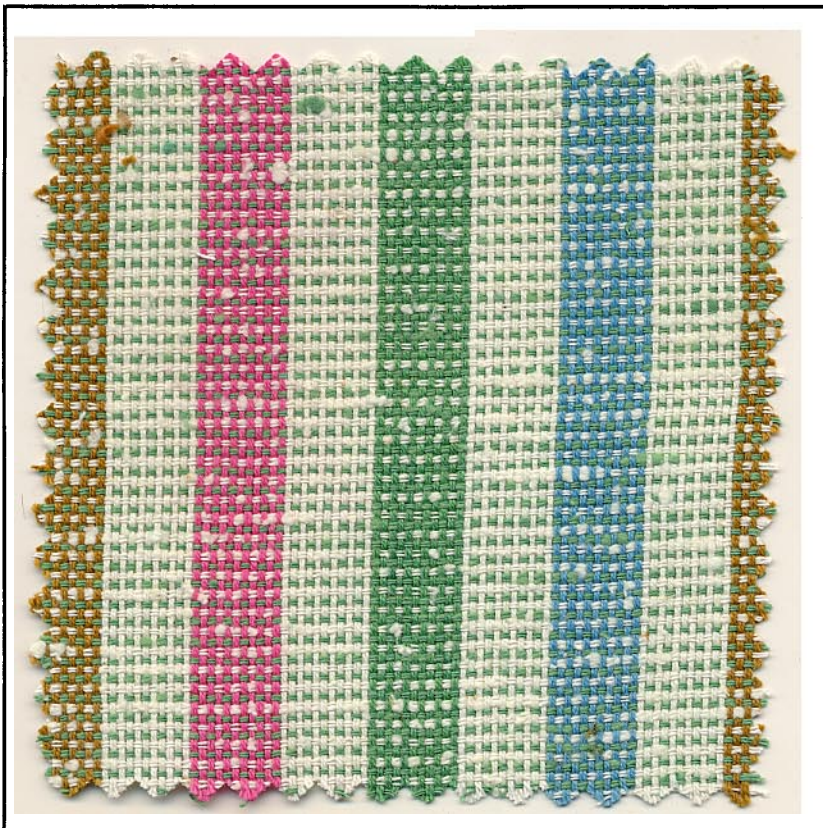
Fiber Dyed:

The fibers are dyed before the yarns are spun and woven into a fabric. In felt constructions, the fibers are dyed before they are pressed or felted into a fabric.



100% Wool—tri-colored stock-dyed

Carnival Stripe, cotton and acetate



Yarn Dyed:

The yarns are dyed before they are woven into checks, plaids, stripes, or herringbone designs. The use of one colored yarn in the warp or lengthwise direction of a fabric, and another colored yarn in the crosswise direction, produces a changeable or iridescent effect.

Cross-Dyed:

A piece of fabric is first woven of two or more fibers. It is then placed in a dye bath made up of two or more different dyes. Each fiber reacts to the dyes differently, absorbing the dye most suitable for dyeing it.

Example:

Warp: 65% Dacron, 35% Avril.

Filling: 65% Dacron, 35% Avril.



Checked, Dacron and Avril

Ombre Dyeing:

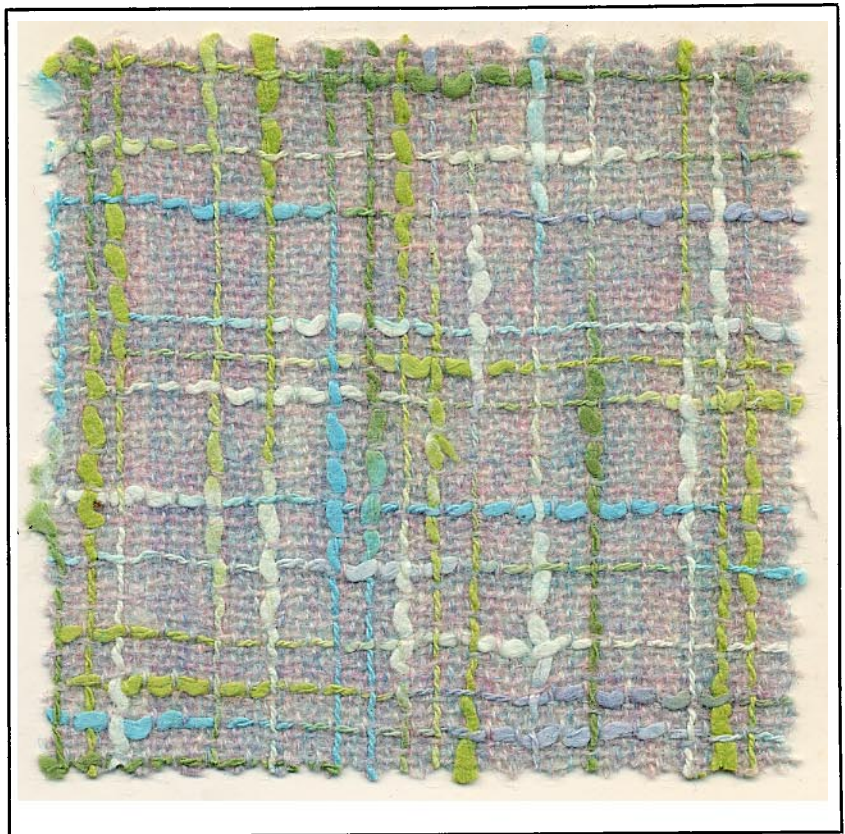
Ombre means shaded in French. A shaded or graduated color effect may be made either by dyeing, printing or weaving. One color may range from a dark shade to a light shade across the width of the fabric; or the selvage edges of the fabric may be a dark shade ranging to a very light shade in the center of the fabric. In weaving or printing more than one color may be used, but shading ranges from light to dark shades, giving a striped effect.

Space Dyeing:

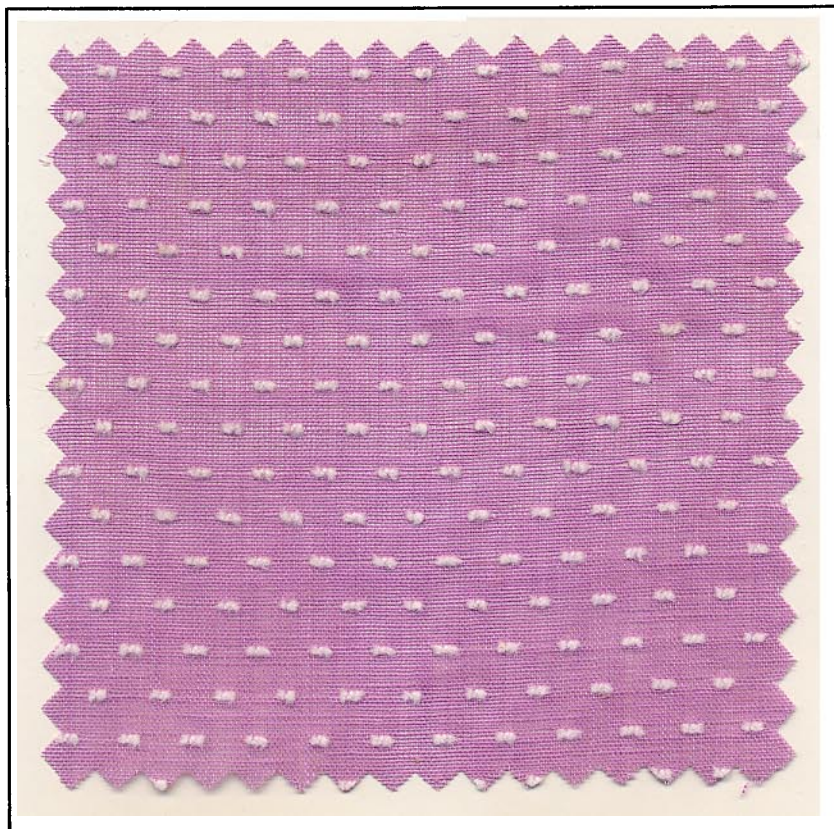
In space dyeing, the warp yarns are dyed or sprayed in a single or multi-colored pattern along a given lineal length of the warp in either a repeat-type or random-type pattern or design. The filling or crosswise yarn may be of a solid color or metallic yarn. The effect achieved is comparable to warp printing. See page 169.

Novelty Yarns:

Novelty yarns, such as slub, thick and thin, bouclé, metallic, or decorative yarns may be woven into a fabric in such a way as to create a structural design.



100% cotton Dotted Swiss—William Lind Co., Inc.



Swivel Design:

Yarns are woven into the basic weave of the fabric, and cut automatically to produce a shaggy or fuzzy design. They are not fastened or knotted to the base weave. They may come out by abrasion in wear or in drycleaning or wetcleaning. Swivel constructions are no longer made in the United States because they are too costly. The box loom construction is most commonly used in the United States at the present time.

Lappet Designs:

Designs are embroidered over the filling yarn of the fabric. The design is knotted to the base fabric. The embroidery yarn is carried on the back of the fabric from one design to the other. After the fabric is woven, the floats are cut. This type of design is more serviceable than a swivel design. The lappet construction is no longer made in the United States because it is too costly.

Dobby and Jacquard Designs:

Simple doobby or figure weaves and the Jacquard figure weave are also considered structural designs. (See pages 239 and 251.)

Knit and Variations:

Many structural designs can be made by varying the knitting techniques and patterns.

B. DECORATIVE DESIGN APPLICATIONS

Decorative designs may also be achieved by the application of colors or chemicals to the surface of the fabric after the fabric has been woven. This is called printing. Examples of various types of printing are discussed on the following pages.

Application Prints:

Also called "direct prints." A process in which colors for the design are applied directly to the fabric, as in printing a paper. Both the background color and the printed design may be printed in the same operation.



100% Cotton

100% Cotton



Blotch Prints:

This is a method of direct printing. In this process, the area around the design is covered with color. A blotch print is very similar in appearance to a discharge print.

Burn-Out Prints:

Definition:

Burn-out designs may be achieved by two methods: A burn-out print uses chemicals instead of colors to create a design. The chemicals burn out one fiber in a fabric made of two fibers, leaving a lacy or sheer and heavy design. This type of printing may also be used to make eyelets or other type holes to create a design. In the latter case, the chemicals burn out the design and fuse the edges around the design. This prevents ravelling of the fabric. Sometimes an adhesive or flocking is used to prevent ravelling.



20% Nylon, 80% Rayon. Some rayon is burned out, leaving a nylon sheer background exposed

100% Cotton



Advantages:

- The technique of burn-out printing makes possible many interesting designs.
- Fabrics printed in this manner are launderable, wetcleanable and drycleanable, depending on the fabric and garment design.

Disadvantages:

- If the chemical process is carried too far, fabric weakening can eventually result in fabric damage after wear and drycleaning.
- Unbound eyelets and holes, if caught, tear readily. They also may fray around the edges of the hole.



*Direct Print—Single Color Black on White Piqué—
Cranston Print Works Co., John Wolf*

Direct Prints:

This method of making prints is also known as cylinder printing and calender printing. In direct printing, the fabric passes between a large cylinder and engraved rollers. The colors are transferred directly from the roller to the fabric.

Duplex Prints:

This is a method of printing the same design on the face and back of the fabric in two distinct operations to achieve the effect of a woven fabric design. This is sometimes called "registered printing."

Discharge Print—100% Cotton—Cranston Print Works Co.

Discharge Prints:

Definition:

Discharge printing is sometimes called "extract" printing. It is a method by which some of the dye of the base or background fabric is removed, thus creating a white design on a colored fabric. A colored design may be imprinted at the same time some of the dye is removed.



- Advantages:**
- This method of printing is less expensive than the “application” or “direct” method of printing, and this is reflected in the cost of a finished fabric and garment.
 - A variety of designs may be made, offering a wide selection of interesting fabrics.

- Disadvantages:**
- If the chemicals used to remove the dye from the background fabric are not neutralized properly, fabric damage may result in the discharged areas in wear and drycleaning. (See page 503.)

LACQUER PRINTS

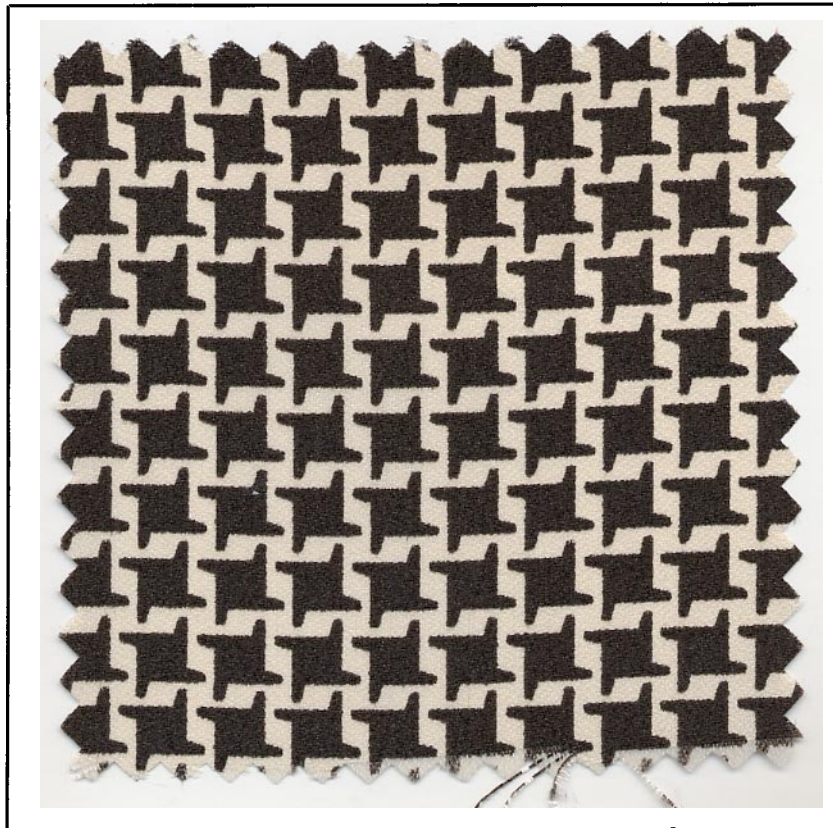
Definition: Lacquer printing is a method of roller printing in which insoluble pigments are mixed with a lacquer carrier to form a printing paste, and then applied to an already finished piece of goods—for example, a taffeta or a faille. The design does not stand out in relief to the surface of the fabric. This type of print is difficult to distinguish from a pigment-resin print (see page 163) and designs that are made by a roller printing method using dye pastes (see page 167).

Advantages:

- A variety of designs may be applied to current colors and fabrics of a particular season.

Disadvantages:

- Some lacquer prints may dryclean satisfactorily; some perform unsatisfactorily in drycleaning. (See page 508.)
- Performance of pigment prints in wear and cleaning depends on the fiber content and the construction of the fabric; the carrier used to carry the pigments.
- Lacquer prints are easily affected by abrasion in wear and in drycleaning.
- The pigments used to make these prints are affected by the dry-side spotting reagents required to remove many types of spots and stains.



LACQUER PRINTS

Orbis Print:

Rich hues and batik-like designs may be achieved by a new fabric printing process and a machine which uses a clay-like material to print short runs of fabric with limitless colors. It originally was an Italian invention but the Dutch are the only ones using it.

The process differs from traditional printing methods. Instead of liquid dyes or pastes, a solid, rubber-like material is used which can be molded like wax or clay. This solid paint, which can be manufactured in every possible color or shade, is then glued to one single cylinder so that an unlimited number of colors can be printed in one operation. The actual printing is also different in that it takes place on a damp fabric that rolls over the paint cylinder. As the layer of solid print can be applied on the cylinder only in a certain thickness, and since the paint "wears off" during the printing, not more than 800 to 1,000 yards of fabric can be printed with one design.



OVERPRINTED METALLIC DESIGNS

Definition: Technically, overprinting is “application” or “direct” printing. It may be compared to applying a design on a wall with a roller paint brush. No attempt is made to dye the base fabric. The goal is to merely cover part of the surface of the fabric with another color. When gold or metallic particles are used, a binder is used to fix the metallic particles to the fabric.

Advantages:

- Entirely new effects can be created by overprinting a fabric.
- Properly cured prints can now be made that will withstand laundering, wetcleaning and drycleaning.
- The addition of a resin finish to the fabric helps to seal in the design and to increase the dimensional stability of the fabric; and it adds a glittering effect to the fabric.

Disadvantages:

- If the binder is not properly selected and cured, metallic overprinted designs may be removed in wear and in drycleaning.

PIGMENT-RESIN PRINTS

Definition: Pigment printing is a method of roller printing in which an insoluble pigment is mixed with a resin binder and thickener to form a printing paste. The printed fabric is treated at high temperature to cure the resin binder. The design does not stand in relief to the surface of the fabric. This type of print is difficult to distinguish from designs made by a roller printing method using dye pastes.

Advantages:

- A variety of attractive designs may be applied to nearly every fabric construction made of cotton, rayon, acetate, or combinations of these fibers.

Disadvantages:

- A great improvement has been made in pigment printing. Some pigment prints dryclean satisfactorily; others wash and wetclean satisfactorily; still others perform unsatisfactorily in drycleaning.
- Performance of pigment prints in wear and drycleaning depends on the fiber content and the construction of the fabric; the type of binder used to carry the pigment; type of pigment and the conditions of "curing" or "setting" of the binder and pigment when the fabric is made. (See page 447.)

100% Acetate.



PIGMENT-RESIN PRINTS

- Some pigments used to make these prints are solvent-soluble. They are not affected by dry-side spotting agents required to remove many types of spots and stains.
- Some of the binders used to make pigment prints are affected by light. It is thought that this affects their colorfastness to drycleaning and wetcleaning.

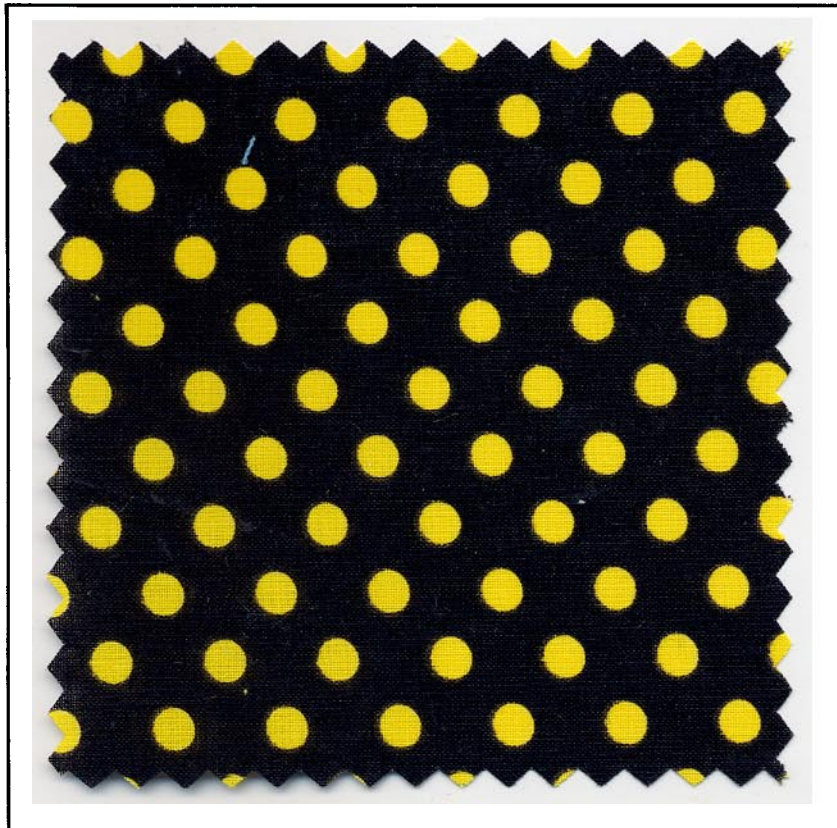
Photographic Prints:

These prints are made by using photo-engraved rollers whereby photographic effects are transferred to the fabric. Several different processes are in use. Many colors can be obtained by using the three primary colors, red, blue, and yellow.



100% Dacron

100% Cotton



Resist Prints:

A design is printed on a white or light colored fabric with a chemical that resists dye. Then the fabric is piece-dyed and washed. The “resisted” patterns stay uncolored against a colored background. The fabric may then be direct printed to insert colors in the blank areas.

Roller Prints: (Direct Print)

This is a machine method of printing fabrics, using an engraved metal roller. The rollers, one for each color in the pattern, are mounted around a cylinder so that the fabric to be printed passes between the roller and the cylinder. Each roller is divided with its own trough containing one color, all combining to produce the pattern. This method of printing permits the use of many colors in the design.



Multi-colored Roller Print—Cranston Print Works Co.

*Golden Trumpet, 77% Acetate, 13% Lurex® Metallic Yarn, 10% Rayon—
The Dow Chemical Company, Loomskill, Inc.*

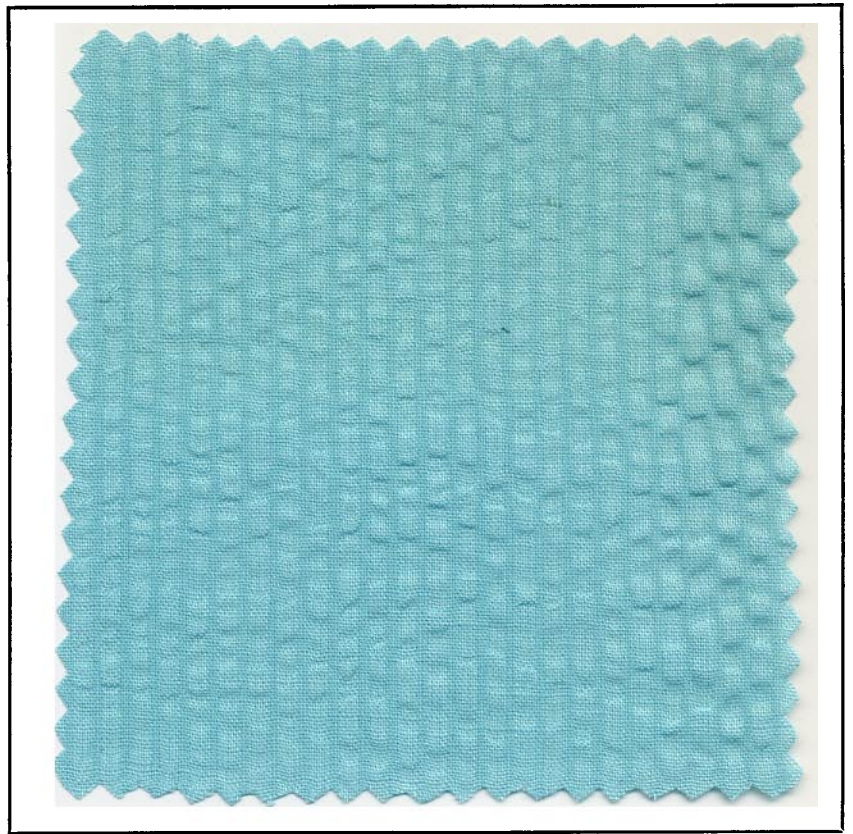


Screen Prints:

This is accomplished through the use of a silk, nylon, or metal screen. Certain areas of the screen are treated to resist the dye. The paste color is forced through the untreated portion of the screen onto the fabric. A separate screen is used for each color of the pattern.

Plissé Prints:

Plissé printing is a process which does not use color. Designs are made by the use of chemicals. The fabric passes between rollers that permit a caustic solution to contact certain areas of the fabric where a puckered design is desired. Sometimes this is accomplished by protecting parts of the fabric with a resisting solution, then putting the fabric through a caustic bath. The unprotected areas of the fabric then pucker.



Olympia Plissé—Cohn-Hall-Marx Company

Taffeta



Warp Prints:

The warp yarns are printed after they have been set up on the warp beam of the loom. The printed warp yarns are woven with a plain colored filling yarn. A soft, indistinct, shadowy or muted design is achieved.

C.

SURFACE APPLIED DESIGNS OTHER THAN PRINTING

There are various other ways fabric designs may be created. These may be described as surface-applied design other than printing. These methods of design applications may be used on both dyed and printed fabrics and on various types of fabric constructions. Examples are shown and discussed on the following pages.

Embroidered—100% Cotton



Embroidered Designs:

A fabric is stitched on a Schiffli machine with one or more threads to make a design. Designs may range from the very simple to very elaborate ones. The design stands in relief to the ground fabric. In some patterns, the fabric may be cut away to form scallops, divided motifs and designs.



EMBOSSSED DESIGNS

Definition: Embossing is a term used to describe a method by which a design may be achieved on the surface of a fabric. There are two methods of making embossed designs in fabrics:

1. *Mechanically*—the design is pressed into a fabric under conditions of heat, moisture, and steam.
2. *Chemically*—The design is pressed into a fabric that has been pretreated with a resin.

Embossed designs may be found on cotton, rayon, silk, acetate, nylon, and other synthetic fabrics of many different types of construction—plain weaves, satin, rib weaves, and others.

- Advantages:**
- This method of fabric design results in many interesting textured effects. Variety and beauty of design are achieved with this technique.
 - With the introduction of the use of heat-setting resins and the use of heat sensitive fibers, embossed designs can now be achieved that are permanent to wear and cleaning.

- Disadvantages:**
- Embossed designs that are made on fabrics of non-heat-sensitive fibers, without the use of resins to make them permanent, may be removed by moisture and heat; perspiration in wear; spilling water or a beverage onto the fabric; steam and pressure required to finish a garment after drycleaning or wetcleaning; the use of moisture to remove a spot or stain. (See page 504.)
 - If the pressure of the embossing roll is not controlled during manufacture, the yarns of a fabric may be abraded or cut. This may show up as fabric damage in wear and cleaning. (See page 504.)
 - Some of the resins used to make the designs may turn yellow or brown with age. This may also occur if the garment is bleached with a chlorine-type bleach. (See page 463.)

FLOCK PRINTS

Definition: In flock printing, a fabric is first printed with an adhesive, then dusted with flocks (short fibers, hair, or metallic particles) which adhere to the adhesive to form a design that stands in relief to the surface of the fabric. Some flock prints are made by an electrostatic method. The flock is actually pulled through the surface of the fabric and stands perpendicular to it.

- Advantages:**
- Flock printing offers a wide selection of interesting fabric designs.
 - Some flock printed fabrics are wetcleanable; others are drycleanable; still others may be washed or drycleaned.
 - Flock print designs are made on a variety of wearing apparel and household fabrics, ranging from sheer curtain and dress fabrics to very heavy dress and drapery fabrics.

- Disadvantages:**
- Performance of flock prints in wear and cleaning depends on: (See pages 506-507).
 1. The base fabric—a firmly woven fabric provides a good base for the flock; a loosely woven fabric does not always provide a good base.



FLOCK PRINTS

2. The type of adhesive used—some of the adhesives used are soluble in drycleaning solvents; others will withstand both solvent and water action. There is no way to predict this.
3. The conditions of the heat-setting of the adhesive in manufacture. These conditions must be properly controlled to produce satisfactory flock prints.
4. The degree of abrasion in wear and in drycleaning.

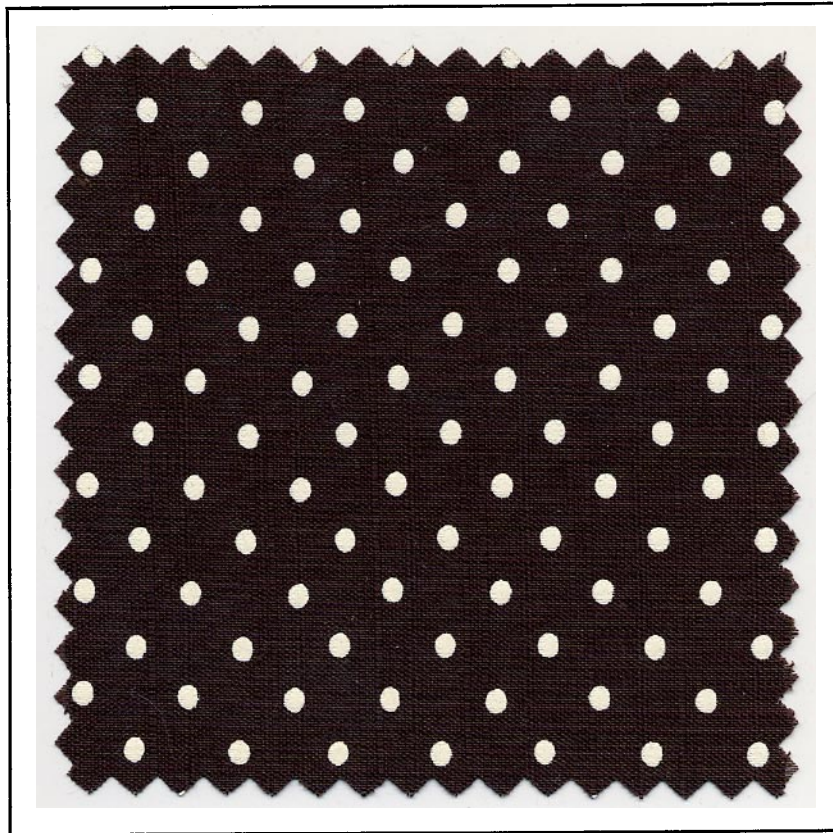
Glued Design:

There are many types of materials that may be used to form design in relief to the surface of the fabric. In some cases these designs are held to the fabric's surface by a glue or an adhesive. For example, felt cut out design glued to a felt skirt; chenille or sequin dots glued to a fabric surface. In some instances, the adhesive used is solvent-soluble and the design is removed in drycleaning.



Hand Painted Designs:

The design may be painted on a section of a garment before it is made or applied to a finished item. For example, hand-painted designs on blouses; painted designs on ties. Some painted designs dry-clean satisfactorily; others are partially or completely removed in drycleaning.



Success, Ducco Dot on Rayon; acetate blend

LACQUER STENCIL PRINTS

Definition: In lacquer stencil printing, insoluble, finely ground pigments are mixed with a binder and a thickener to form a printing paste. This is then applied to the fabric in a variety of designs. The design stands in relief to the background fabric. They actually look like paint designs.

Advantages:

- Attractive and unusual designs may be applied to a variety of fabrics such as satin, taffeta, plain weave fabrics made of cotton, rayon, acetate, and other fibers.

Disadvantages:

- A great improvement has been made in lacquer stencil print designs. Some lacquer stencil prints dryclean satisfactorily; others wetclean satisfactorily; still others perform unsatisfactorily to wear and dry-cleaning.
- Performance of lacquer stencil prints in wear and drycleaning depends on the fiber content and the construction of the fabric; the type of binder used to carry the pigment; and the conditions of the "curing" and "setting" of the binder and pigment when the fabric is made. (See page 508.)

MOIRÉ

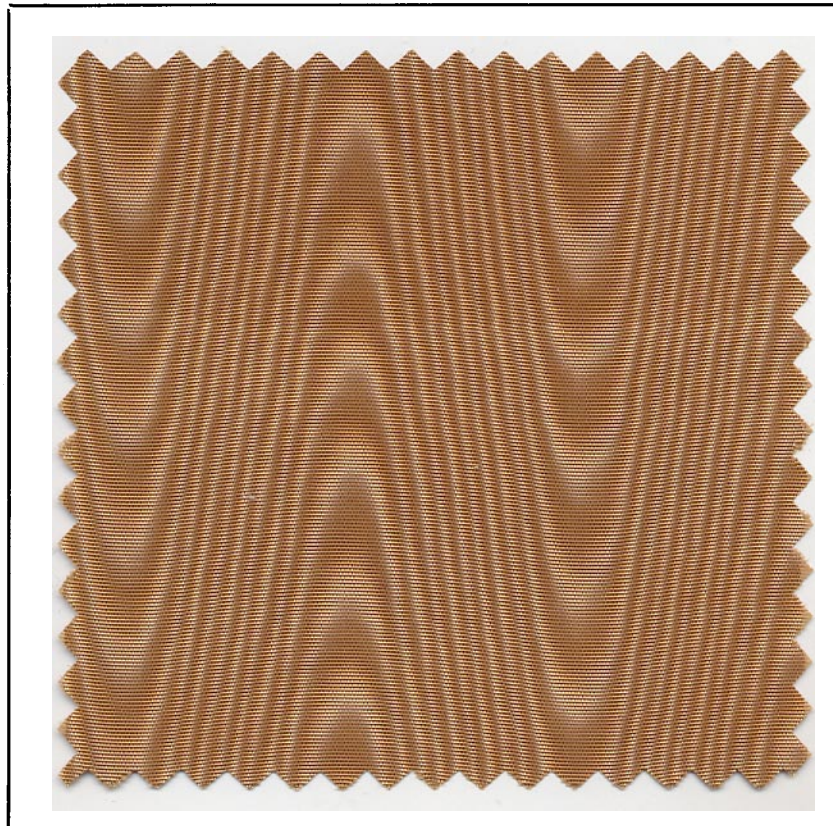
Definition: Moiré is a term used to describe several methods by which a design may be achieved on the surface of a fabric. There are three distinct types:

1. Bar moiré—the wavy designs form rows or bars. This is a mechanical method, depending on moisture, heat, and pressure.
2. Scratch moiré—the yarns are deflected to produce a variety of simple designs. A mechanical method as described above.
3. The H-process—a combination of chemical and mechanical processes that may result in a larger and more complicated design.

Moiré designs may be found on cotton, silk, rayon, acetate, nylon, and other synthetic fabrics of many different constructions. 95% of all moirés on today's market are Bar Moirés.

- Advantages:**
- Many interesting and beautiful designs can be produced by moiréing.
 - With the introduction and use of resin finishes, and the use of the heat-sensitive fibers, moiré designs can now be made that are permanent to wetcleaning and drycleaning.

*Acetate Taffeta—Permanent Moiré
Newburgh Moiré Co., Inc.*



MOIRÉ

- Disadvantages:**
- Moiré designs made on non-heat-sensitive fibers, without the use of a resin to make them permanent, may be removed by moisture and heat, such as perspiration, spilling water or a beverage onto a fabric, steam or pressure used to finish the fabric after drycleaning or wetcleaning, or the use of moisture to remove a spot or stain. (See page 509.)