**BACK COATING** - The application of latex or adhesive to the back of a carpet to anchor the tufts, usually followed immediately by addition of a secondary backing material such as woven jute or nonwoven polypropylene.

**BACKED CLOTH** - A material with an extra warp or filling added for weight and warmth. Satin-weave and twill-weave constructions are frequently used in the design of backed cloth because they are relatively resistant to the passage of air.

**BACK FILLING** - A solution composed of varying amounts of cornstarch, China clay, talc, and tallow that is applied to the back side of low-grade, low-cost cloth to change its hand, improve its appearance, and increase its weight.

**BACK WARP** - The warp which, along with the back filling, actually forms the second face (back) of double, triple, or quadruple fabrics.

**BACK WINDING** - 1. Rewinding yarn or fiber from one type of package to another. 2. Winding yarn as it is deknit.

**BACTERICIDAL FIBER** - Fiber used for medical applications, socks, shoe liners, etc., in which bactericides are introduced directly into the fiber matrix as opposed to fiber simply having a bactericidal finish applied.

**BAGGING** - 1. A fabric woven in cylindrical or tubular form on an ordinary cam loom and used for grain bags, etc. 2. Fabric bulging caused by extension at the knees, elbows, etc., of a garment lacking dimensional stability.

**BAGGY CLOTH** - A fabric that does not lie flat, caused by sections of tight or loose yarns in either the warp or the filling.

**BALANCED CLOTH** - A term describing a woven fabric with the same size yarn and the same number of threads per inch in both the warp and the filling direction.

**BALANCED TWISTS** - In a plied yarn or cord, an arrangement of twist which will not cause the yarn or cord to twist on itself of kink when held in an open loop.

**BALE** - A bag, sack, square or oblong box, or package into which silk, staple fibers, or tow are compressed. The common shipping and storage package for these fibers.

**BALLING UP** - A defect in which loose or frayed fibers form into a ball and are then woven into the fabric.

**BALL MILL** - A standard method of reducing water-insoluble substances such as pigments or dyestuffs to a fine state of division. It consists of a cylinder, rotating on an axis, partly filled with steel balls, porcelain balls, or common pebbles. The controlling factors are size of balls, relative volumes occupied by balls and substance, type and quality of substance, and rate and time of rotation.

**BALLOON** - The curved paths of running yarns about the take-up package during spinning, down twisting, plying, or winding, or while they are being withdrawn over-end from packages under appropriate yarn winding conditions.

**BALLOON FABRIC** - A plain-weave cloth having the same breaking strength in each direction. This fabric is made from fine (60's to 100's) combed yarn woven to constructions of 92 x 108 to 116 x 128. Vulcanized balloon fabric is used for air cells in planes and barrage balloons.

**BALL WARP** - Parallel threads in the form of a twistless rope wound into a large ball. When wound mechanically with quick traverse a ball warp may be made in the form of a large cylindrical package.
**BANDING, HEAVY TOW** - Nonuniform distribution of filaments across a tow band width.

**BANDLE** - A coarse homespun linen made on narrow hand looms in Ireland.

**BANK** - Another name for a yarn creel.

**BARATHEA** - 1. A silk, rayon, or manufactured fiber necktie fabric with a broken rib weave and a characteristic pebbly appearance. 2. A fine dress fabric with a silk warp and worsted filling, woven in a broken filling rib which completely covers the warp. 3. A smooth-faced worsted uniform cloth with an indistinct twilled basket weave of fine two-ply yarns.

**BAR CODE** - Adjacent stripes of varying width used to represent alpha-numeric characters. These permit rapid reading by means of electronic scanners.

**BARKING** - The removal of bark from wood prior to pulping.

**BARRE** - A defect characterized by bars or streaks, fillingwise in woven fabrics or coursewise in weft-knit fabrics, caused by uneven tension in knitting, defective yarn, improper needle action, or other similar factors.

**BASE FABRIC** - In coated fabrics, the underlying substrate (q.v.).

**BASIC** - A term describing substances having an alkaline nature. Bases may or may not be water soluble.

**BASIS WEIGHT** - The weight of a unit area of fabric. Examples are ounces per square yard and grams per square centimeter.

**BASKET STITCH** - In this knit construction, purl and plain loops are combined with a preponderance of purl loops in the pattern courses to give a basket-weave effect.

**BASKET WEAVE** - A variation of the plain weave in which two or more warp and filling threads are woven side by side to resemble a plaited basket. Fabrics have a loose construction and a flat appearance and are used for such things as monk’s cloth and drapery fabrics.

**BAST FIBER** - Any of certain strong, woody fibers used in making rope, cordage etc.

**BAYARDERE** - A very broad term for stripes that run crosswise in a knit or woven fabric.

**BCF YARNS** - Bulked continuous filament yarns for carpet trade, usually nylon, polypropylene, or polyester.

**Beaded Velvet** - Velvet with a cut-out pattern or a velvet pile effect, made on a Jacquard loom. This fabric is used primarily for evening wear.

**BEAM** - A cylinder of wood or metal, usually with a circular flange on each end, on which warp yarns are wound for slashing, weaving, and warp knitting.

**Beam Dyeing Machine** - A machine for dyeing warp yarns or fabrics that have been wound onto a special beam, the barrel of which is evenly perforated with holes. The dye liquor is forced through the yarn or fabric from inside to outside and vice versa.

**BEARDING** - Fuzz on loop pile carpets usually resulting from poor anchorage or fiber snagging.

**BEATER** - 1. The machine which does most of the opening and cleaning work on a fiber picker and opener. Revolving at high speed, it beats against the fringe of fiber as the latter is fed into the machine. 2. A machine used in the paper industry for opening pulp and combining additives.
**BEATING-UP** - The last operation of the loom in weaving, in which the last pick inserted in the fabric is “beat” into position against the preceeding picks.

**BEAVER CLOTH** - Made of high-quality wool, this heavy but soft fabric has a deep nap. Beaver cloth is frequently used in overcoats.

**BECK** - A vessel for dyeing fabric in rope form, consisting primarily of a tank and a reel to advance the fabric.

**BEDFORD CORD** - A rib-weave fabric with raised lengthwise cords produced by using stuffing threads in the warp. Since the fabric is strong and wears well, it is used for upholstery, suits, riding habits, and work clothes.

**BEETLING** - A process in which round-thread linen or cotton fabric is pounded to give a flat effect. Beetled linen damask has an increased luster and a leather-like texture. Beetling is also used to give a thready or linen-like appearance to cotton.

**BENDING LENGTH** - A measure of fabric stiffness based on how the fabric bends in one plane under the force of gravity.

**BENDING MODULUS** - Maximum stress per unit area that a specimen can withstand without breaking when bent. For fibers, the stress per unit of linear fiber weight required to produce a specified deflection of a fiber.

**BENGALINE** - A fabric similar to faille, only heavier, with a fine weave and widthwise cords. Originally, bengalines were made of a silk, wool, or rayon warp with a worsted or cotton filling and used for dresses, coats, trimmings, and draperies. Modern bengalines are made with filament acetate or polyester warps. Also, some bengalines have fine spun warps with 2- and 3-ply heavier spun yarns for filling cord effects.

**BENZENE** - A volatile, flammable, colorless liquid hydrocarbon, (C₆H₆), used as an illuminant, a solvent for fats and resins, a raw material in dye synthesis, and the hydrocarbon source for many manufactured fibers.

**BENZOATE FIBER** - Fiber with a silk-like hand made from a condensation polymer of p-(Bhydroxyethoxy) benzoic acid.

**BETA CELLULOSE** - One of the three forms of cellulose. It has a lower degree of polymerization that the alpha form. With gamma cellulose it is known as hemicellulose.

**BIAS FABRIC** - A two-dimensional fabric that when oriented in the XY plane contains fibers that are aligned in a different direction, i.e., 45° to the X-axis fibers.

**BIAS FILLING** - A fabric defect in which the filling yarn does not run at a right angle to the warp. The principal cause is improper processing on the tenter frame.

**BICOMPONENT YARNS** - Spun or filament yarns of two generic fibers or two variants of the same generic fiber.

**BICONSTITUENT FIBER** - A fiber extruded from a homogeneous mixture of two different polymers. Such fibers combine the characteristics of the two polymers into a single fiber.

**BIDIRECTIONAL FABRIC** - A fabric having reinforcing fibers in two directions, i.e., in the warp (machine) direction and filling (cross-machine) direction.

**BILATERAL FIBERS** - Two generic fibers or variants of the same generic fiber extruded in a side-by-side relationship.

**BINDER** - An adhesive applied with a solvent or a softenable plastic melted to bond fibers together in a web or to bind one web to another.

**BINDER CONTENT** - The weight of adhesive used to bond the fibers of a web together. Usually expressed as percent of fabric weight.
BINDER FIBERS - Fibers that can act as an adhesive in a web because their softening point is relatively low compared with that of the other fibers in the material.

BIO DEGRADABLE - The ability of a substance to be broken down by bacteria so that it can be returned to the environment without posing an environmental hazard.

BIRDSEYE - 1. A generic term describing a cloth woven on a dobby loom, with a geometric pattern having a center dot resembling a bird’s eye. Originally birdseye was made of cotton and used as a diaper cloth because of its absorbent qualities, but now the weave is made from a variety of fibers or fiber blends for many different end uses. 2. A speckled effect on the back of a knit fabric resulting from the use of different colors on the face design.

BIREFRINGENCE - An optical term meaning double refraction, and used in examination of manufactured fibers to measure the degree of molecular orientation effected by stretching or drawing.

BLANKET - An unquilted bedding fabric designed primarily to provide thermal insulation.

BLEACHING - Any of several processes to remove the natural and artificial impurities in fabrics to obtain clear whites for finished fabric or in preparation for dyeing and finishing.

BLEB - A blister or bubble on the face of a spinning jet, interrupting the extrusion of the filament from the spinneret hole involved.

BLEB RATE - The frequency of bleb formation in an extrusion operation.

BLEEDING - Loss of color by a fabric or yarn when immersed in water, a solvent, or a similar liquid medium, as a result of improper dyeing or the use of dyes of poor quality. Fabrics that bleed can cause staining of white or light shade fabrics in contact with them while wet.

BLEND - 1. A yarn obtained when two or more staple fibers are combined in a textile process for producing spun yarns (e.g., at opening, carding, or drawing). 2. A fabric that contains a blended yarn (of the same fiber content) in the warp and filling.

BLENDING - The combining of staple fibers of different physical characteristics to assure a uniform distribution of these fibers throughout the yarn.

BLINDING - Loss of luster of fibers after wet processing.

BLISTER - A bulge resulting from separation of coating or laminating material from the base fabric.

BOARDY - A term used to describe a fabric with a very stiff hand.

BOBBIN - A cylindrical or slightly tapered barrel, with or without flanges, for holding slubbings, rovings, or yarns.

BOBTEX® ICS YARN SYSTEM - A process for producing a simulated spun yarn by embedding individual fibers in a thermoplastic or adhesive coating on a filament yarn.

BODY - The compact, solid, or firm feel of a fabric.

BOILING WATER SHRINKAGE - A test designed to measure shrinkage in a cord, yarn, or high-shrinkage fiber when it is immersed in boiling water while under a tension of 0.05 grams/denier.

BOLT - A roll or piece of fabric of varying length.

BONDED FABRIC - 1. A fabric containing two or more layers of cloth joined together with resin, rubber, foam, or adhesive to form one ply.
**BONDING** - 1. A process for adhesive laminating two or more fabrics or fabric and a layer of plastic foam. There are two methods: the flame method used for bonding foam and the adhesive method used for bonding face and backing fabrics. 2. One of several processes of binding fibers into thin sheets, webs, or battings by means of adhesives, plastics, or cohesion (self-bonding).

**BOND STRENGTH** - 1. The amount of force required to delaminate a piece of woven or knitted fabric from its backing. 2. The amount of force required to break the fusion points found in certain nonwovens. 3. The amount of force required to break the chemical bonds between atoms in molecules and crystalline salts.

**BOOK CLOTH** - Print cloth treated with pyroxylin or starch and clay and used in bookbinding.

**BOOK FOLD** - A method of folding finished fabric in which the fabric is first folded in half widthwise, then folded back and forth in equal lengths. Finally, the fold edge on each side is folded to the inside, forming a compact bundle equal in length to one-half the width of the goods.

**BORON FIBER** - A vapor-deposited filament made by depositing boron on a heated tungsten wire. These fibers are being developed for use in aircraft and space applications. They can be woven into fabrics.

**BOSS** - That part of a drafting roll of largest diameter where the fibers are gripped. It may be an integral part of the roll, as in steel rolls, or it may have a covering of leather, cork, etc. In the former case, the boss is fluted.

**BOUCLE** - A fabric woven or knit with bouclé yarns. Bouclé fabric has a looped or knotted surface and is used for sportswear and coats.

**BOUCLE YARN** - A novelty yarn with loops which give fabrics a rough appearance. Some bouclé yarns have cotton cores with other fibers wound around them. Bouclé yarns may be made from wool, cotton, silk, linen, manufactured fibers, or combinations of fibers.

**BOURRELET** - A double-knit fabric with raised loops running horizontally across the surface of the cloth giving a rippled or corded effect.

**BOW** - The greatest distance, measured parallel to the selvages, between a filling yarn and a straight line drawn between the points at which this yarn meets the selvages. Bow may be expressed directly in inches or as a percentage of the width of the fabric at that point.

**BOX LOOM** - A loom using two or more shuttles for weaving fabrics with filling yarns that differ in fiber type, color, twist, level, or yarn size. The box motion is automatic, changing from one shuttle to another. Examples of fabrics made on box looms are crepes and ginghams.

**BOX MARK** - A fine line parallel to the filling caused by shuttle damage to a group of filling yarns.

**BRAID** - 1. A narrow textile band, often used as trimming or binding, formed by plaiting several strands of yarn. The fabric is formed by interfacing the yarns diagonally to the production axis of the material. 2. In aerospace textiles, a system of three or more yarns which are interlaced in such a way that no two yarns are twisted around each other.

**BiAxial Braid** - A braided structure with two yarn systems one running in one direction and the other in the opposite direction. **TriAxial Braid** - A braided structure with axial yarns running in the longitudinal direction.

**BRAID ANGLE** - The acute angle measured from the axis of a fabric or rope to a braiding yarn.

**BRAIDED FABRIC** - A narrow fabric made by crossing a number of strands diagonally so that each strand passed alternatively over or under one or more of the other strands. They are frequently used in shoelaces and suspenders.
**BRAIDING**- The intertwining of three or more strands to make a cord. The strand form a regular diagonal pattern down the length of the cord.

**BREAK FACTOR**- A measure of yarn strength calculated as: (1) the product of breaking strength times indirect yarn number, or (2) the product of breaking strength times the reciprocal of the direct yarn number.

**BREAKING LENGTH**- A measure of the breaking strength of a yarn; the calculated length of a specimen whose weight is equal to its breaking load. The breaking length expressed in kilometers is numerically equal to the breaking tenacity expressed in grams-force per tex.

**BREAKING LOAD**- The maximum load (or force) applied to a specimen in a tensile test carried to rupture. It is commonly expressed in grams-force (kilograms-force), pounds, or newton’s.

**BREAKING STRENGTH**- 1. The maximum resultant internal force that resists rupture in a tension test. The expression “breaking strength” is not used for compression tests, bursting tests, or tear resistance tests in textiles. 2. The load (or force) required to break or rupture a specimen in a tensile test made according to a specified standard procedure.

**BREAKING TENACITY**- The tensile stress at rupture of a specimen (fiber, filament, yarn, cord, or similar structure) expressed as newtons per tex, grams-force per tex, or gram-force per denier. The breaking tenacity is calculated from the breaking load and linear density of the unstrained specimen, or obtained directly from tensile testing machines which can be suitably adjusted to indicate tenacity instead of breaking load for specimens of known linear density. Breaking tenacity expressed in grams-force per tex is numerically equal to breaking length expressed in kilometers.

**BREAK SPINNING**- A direct spinning process for converting manufactured fiber tows to spun yarn that incorporates prestretching and tow breaking with subsequent drafting and spinning in one operation.

**BRIGHT**- The term applied to fibers whose luster has not been reduced by physical or chemical means; the opposite of dull or matte.

**BRISTLE**- 1. A short, stiff, coarse fiber. 2. The hair of the hog.

**BRITTLE POINT**- The temperature at which a polymer no longer exhibits viscoelastic properties.

**BROAD GOODS**- Woven fabrics 18 inches or more in width.

**BROADLOOM**- A term that refers to carpets woven in widths from 54 inches to 18 feet, as distinguished from narrow loom widths of 27 to 36 inches.

**BROCADE**- 1. A rich, Jacquard-woven fabric with an all over interwoven design of raised figures or flowers. The pattern is emphasized by contrasting surfaces or colors and often has gold or silver threads running through it. The background may be either a satin or a twill weave. 2. A term describing a cut-pile carpet having a surface texture created by mixing twisted and straight standing pile yarns.

**BROCATELLE**- A fabric similar to brocade with a satin or twill figure in high relief on a plain or satin background.

**BROKEN END**- A broken, untied warp thread in a fabric. There are numerous causes, such as slubs, knots, improper shuttle alignment, shuttle hitting the warp shed, excessive warp tension, faulty sizing, and rough reeds, heddles, dropwires, and shuttles.

**BROKEN PICK**- A broken filling thread in a fabric. Usual caused include too much shuttle tension, weak yarn, or filling coming into contact with a sharp surface.
**BRUSHING** - A finishing process in which rotating brushes raise a nap on knit or woven fabrics. Brushing is used on sweaters, scarves, knit underwear, wool broadcloths, etc.

**BUCKRAM** - A scrim fabric with a stiff finish, often used as interlining.

**BUILDUP** - A term applied to substantivity of dye for a textile material. It refers to the ability of a dye to produce deep shades.

**BULK DEVELOPMENT** - Any of various relaxation treatments to produce maximum bulk in textured or latent crimp yarns or in fabrics made therefrom. The essential conditions are heat, lubrication, movement, and the absence of tension. Bulk development may be accomplished during wet processing or may be a separate operation such as hot-air tumbling, steam-injection tumbling, or dry cleaning.

**BUNTING** - A soft, flimsy, loose-textured, plain weave cloth most frequently used in flags. Bunting was originally made from cotton or worsted yarns, but today’s flags are made primarily from nylon or acrylic fibers.

**BURLAP** - A coarse, heavy, plain weave fabric constructed from singles yarn of jute. Used for bags, upholstery lining, in curtains and draperies.

**BURLING** - 1. The process of removing loose threads and knots from fabrics with a type of tweezers called a burling iron. 2. The process of correcting loose tufts and replacing missing tufts following carpet construction.

**BURNING RATE** - The speed at which a fabric burns. It can be expressed as the amount of fabric affected per unit time, in terms of distance or area traveled by the flame, afterglow, or char.

**BURSTING STRENGTH** - 1. The ability of a material to resist rupture by pressure. 2. The force required to rupture a fabric by distending it with a force applied at right angles to the plane of the fabric under specified condition. Bursting strength is a measure widely used for knit fabrics, nonwoven fabrics, and felts where the constructions do not lend themselves to tensile tests. The two basic types of bursting tests are the inflated diaphragm method and the ball-bust method.